

[4/3167] 12DICHLORETHDEG-PWY
1,2-dichloroethane degradation
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[5/3167] 14DICHLORBENZDEG-PWY
1,4-dichlorobenzene degradation
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[6/3167] 1CMET2-PWY
folate transformations III (<i>E. coli</i>)
(9 Reactions)

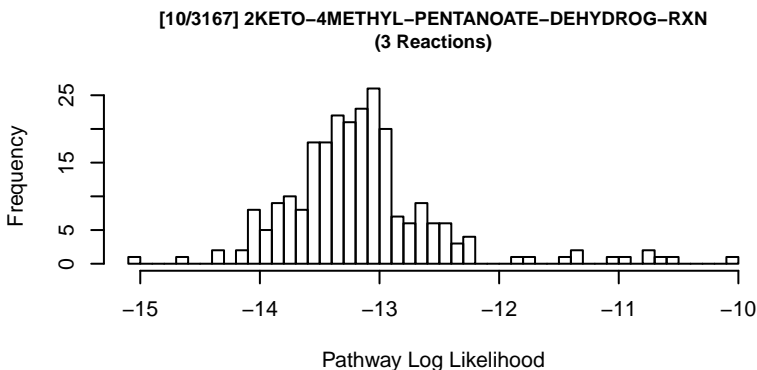
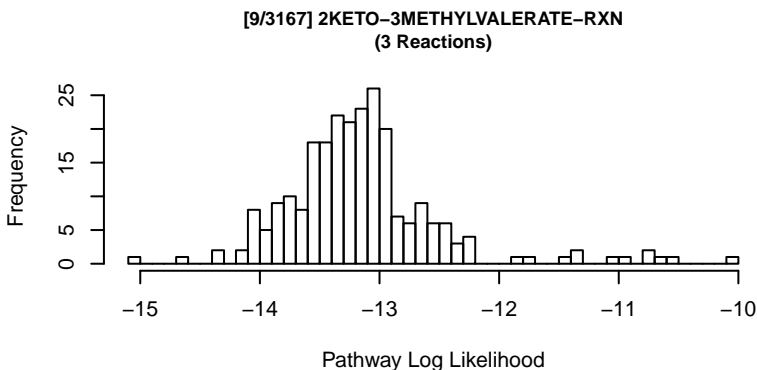
Missing 2 Reaction(s) from Pathway.

[7/3167] 2AMINOBNZDEG-PWY
anthranilate degradation III (anaerobic)
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[8/3167] 2ASDEG-PWY
orthanilate degradation
(4 Reactions)

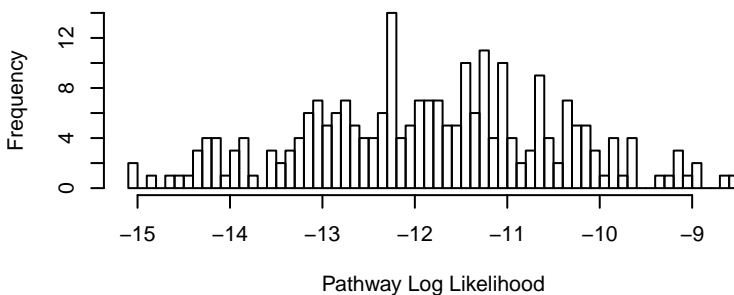
Missing 1 Reaction(s) from Pathway.



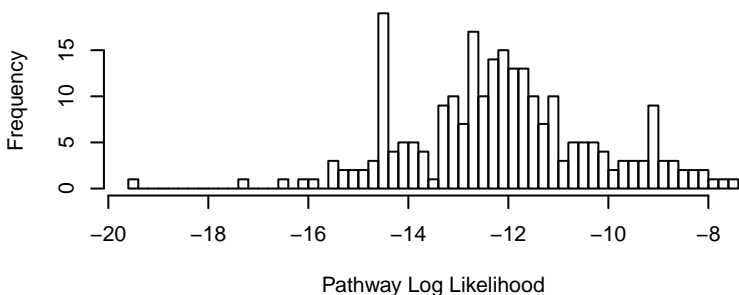
[11/3167] 2OXOBUTYRATECAT-PWY
2-oxobutanoate degradation II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

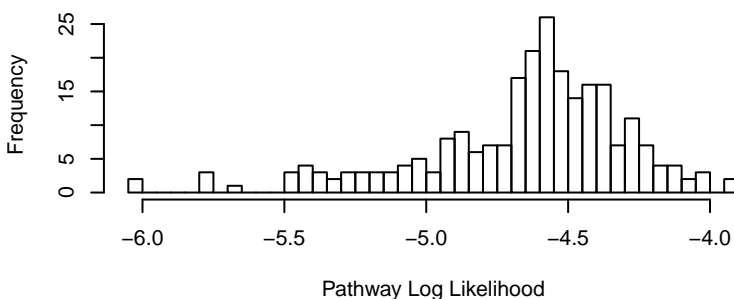
[12/3167] 2OXOGLUTARATEDEH-RXN
(3 Reactions)



[13/3167] 2PHENDEG-PWY
phenylethylamine degradation I
(2 Reactions)



[14/3167] 3-CHLORO-D-ALANINE-DEHYDROCHLORINASE-RXN
(1 Reactions)



[15/3167] 3-HYDROXYPHENYLACETATE-DEGRADATION-PWY
4-hydroxyphenylacetate degradation
(8 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[16/3167] 3.1.27.5-RXN
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[17/3167] 3.1.3.77-RXN
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[18/3167] 3.5.3.21-RXN
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[19/3167] 3.5.5.4-RXN
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

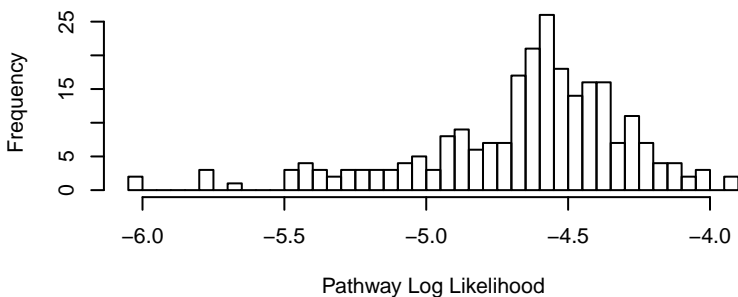
[20/3167] 4-HYDROXYMANDELATE-DEGRADATION-PWY
4-hydroxymandelate degradation
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

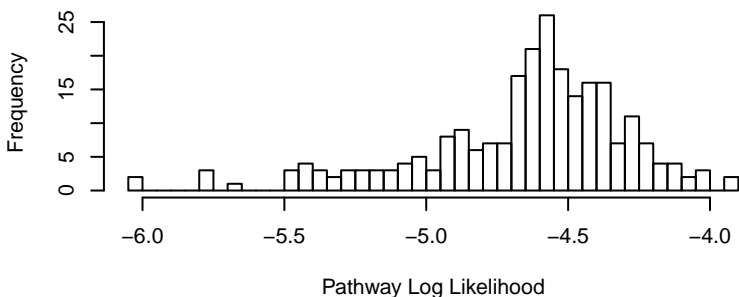
[21/3167] 4.1.1.68-RXN
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

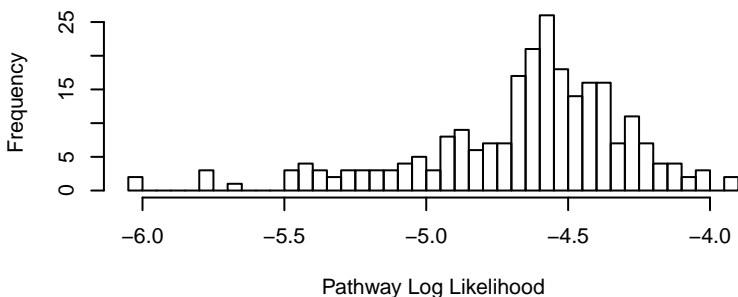
[22/3167] 4.1.99.4-RXN
(1 Reactions)



[23/3167] 4.3.1.17-RXN
(1 Reactions)



[24/3167] 4.4.1.25-RXN
(1 Reactions)



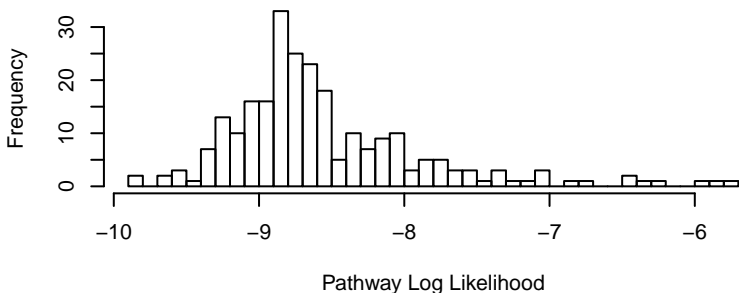
[25/3167] 4TOLCARBDEG-PWY
4-toluenecarboxylate degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

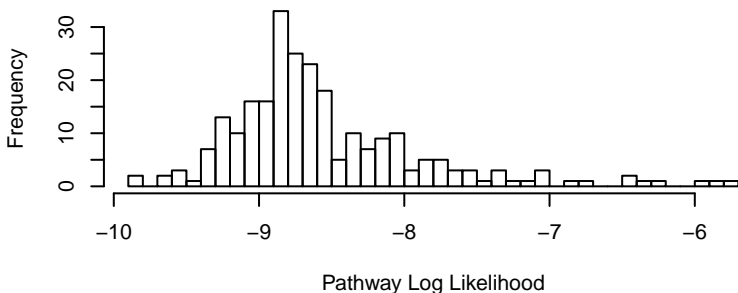
[26/3167] 6-HYDROXYCINEOLE-DEGRADATION-PWY
1,8-cineole degradation
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

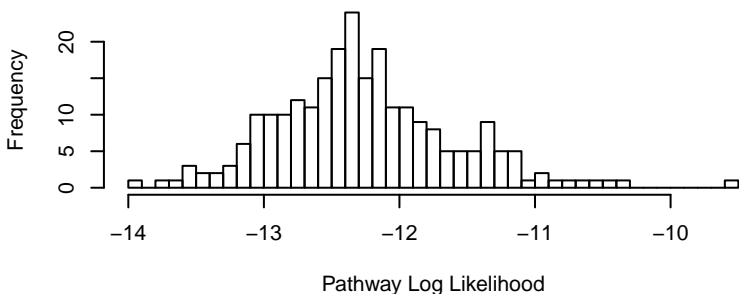
[27/3167] 6.3.5.6-RXN
(2 Reactions)



[28/3167] 6.3.5.7-RXN
(2 Reactions)



[29/3167] ACETOACETATE-DEG-PWY
acetoacetate degradation (to acetyl CoA)
(3 Reactions)



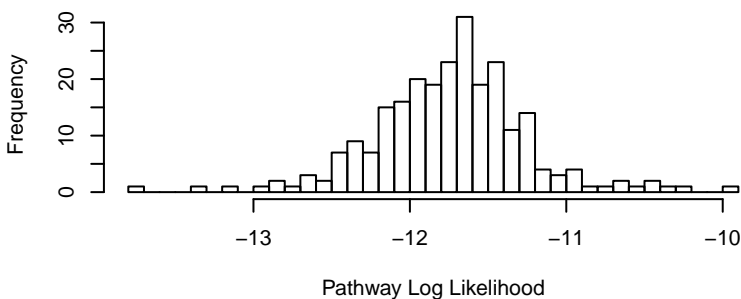
[30/3167] ADENOSYLHOMOCYSCAT-PWY
L-methionine salvage from L-homocysteine
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[31/3167] AEROBACTINSYN-PWY
aerobactin biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

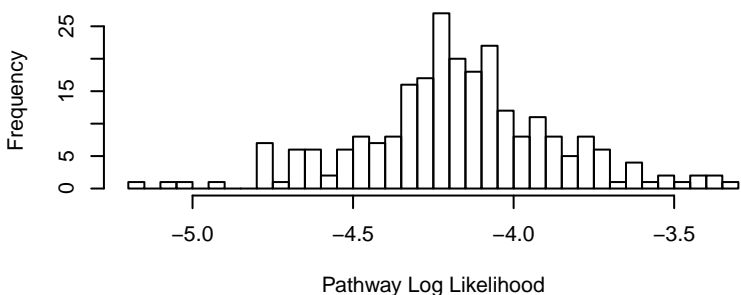
[32/3167] ALACAT2-PWY
L-alanine degradation II (to D-lactate)
(3 Reactions)



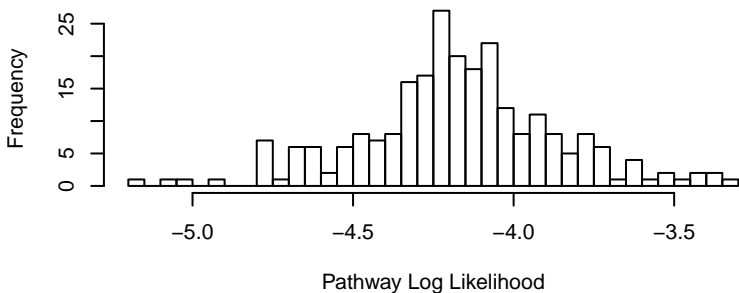
[33/3167] ALADEG-PWY
L-alanine degradation I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

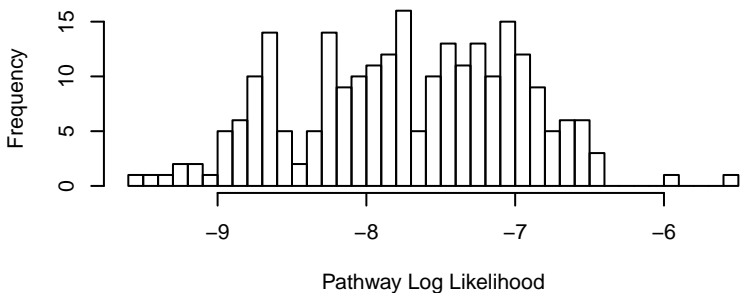
[34/3167] ALANINE-DEG3-PWY
L-alanine degradation III
(1 Reactions)



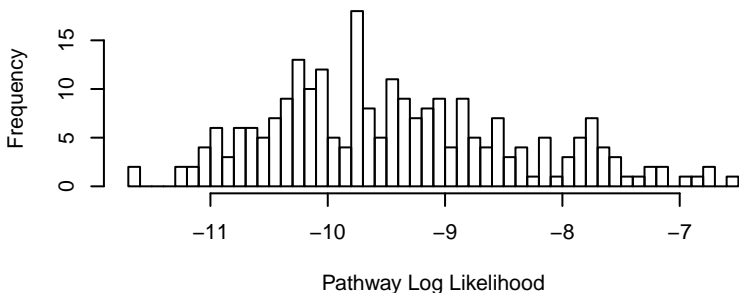
[35/3167] ALANINE-SYN2-PWY
L-alanine biosynthesis II
(1 Reactions)



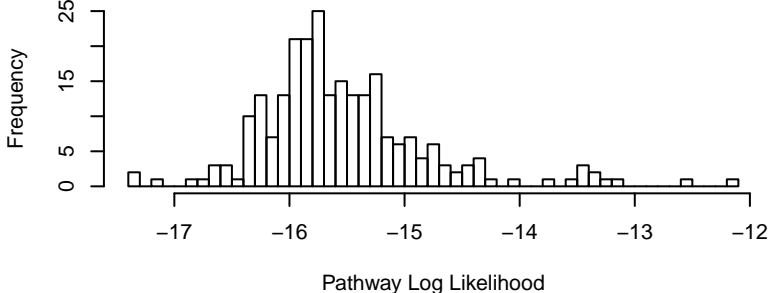
[36/3167] ALANINE-VALINESYN-PWY
L-alanine biosynthesis I
(2 Reactions)



[37/3167] ALKANEMONOX-PWY
two-component alkanesulfonate monooxygenase
(2 Reactions)



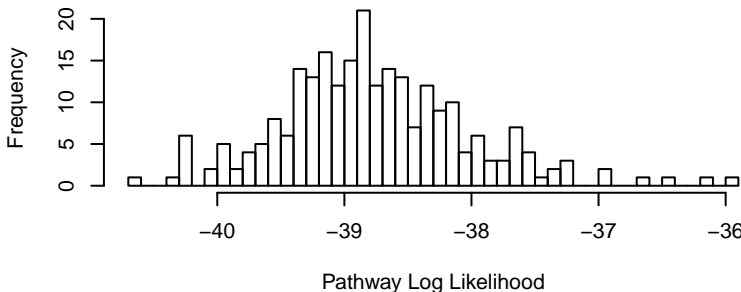
[38/3167] AMMASSIM-PWY
ammonia assimilation cycle III
(4 Reactions)



[39/3167] AMMOXID-PWY
ammonia oxidation I (aerobic)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

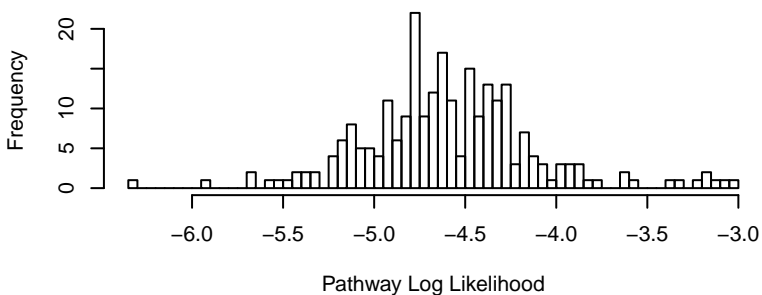
[40/3167] ANAGLYCOLYSIS-PWY
glycolysis III (from glucose)
(12 Reactions)



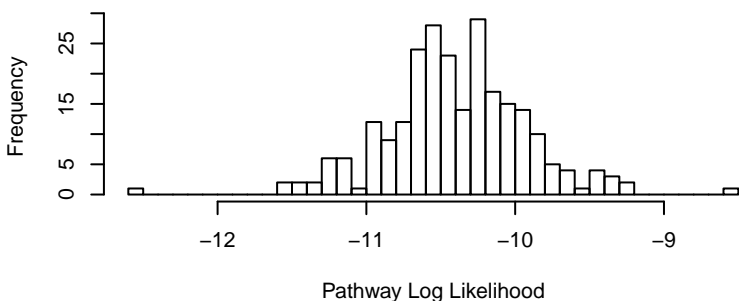
[41/3167] ANAPHENOXI-PWY
L-phenylalanine degradation II (anaerobic)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

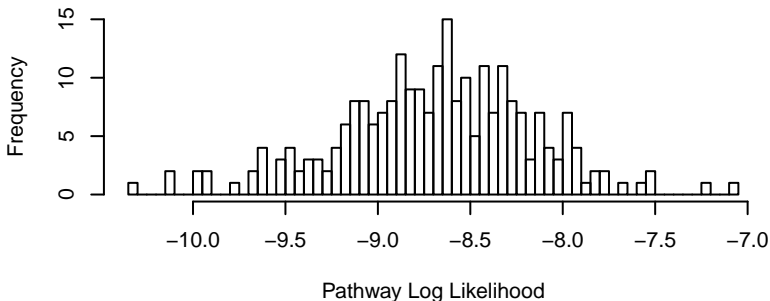
[42/3167] APYRASE-RXN
(1 Reactions)



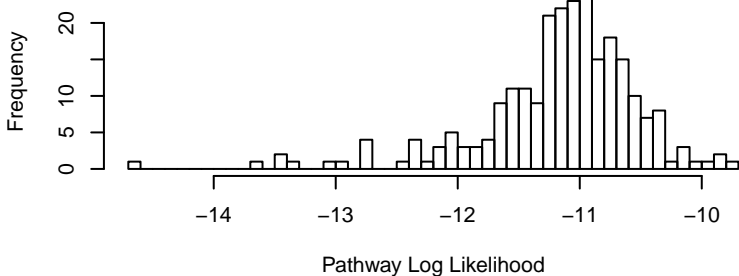
[43/3167] ARABCAT-PWY
L-arabinose degradation I
(3 Reactions)



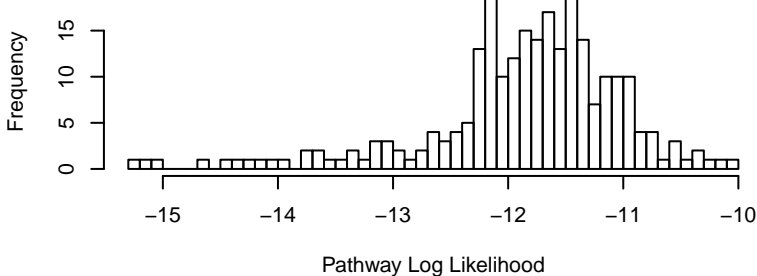
[44/3167] ARG-GLU-PWY
L-arginine degradation VII (arginase 3 pathway)
(2 Reactions)



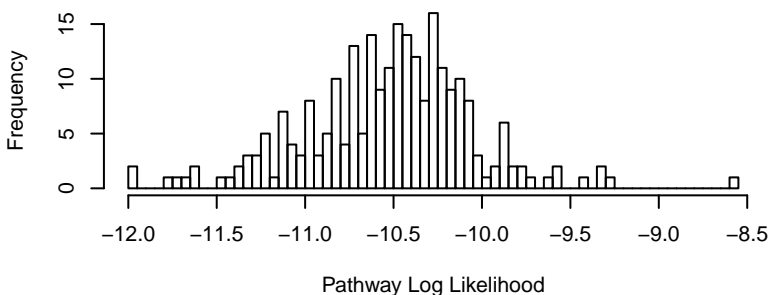
[45/3167] ARG-PRO-PWY
L-arginine degradation VI (arginase 2 pathway)
(3 Reactions)



[46/3167] ARGASEDEG-PWY
L-arginine degradation I (arginase pathway)
(3 Reactions)



[47/3167] ARGDEG-III-PWY
L-arginine degradation IV (arginine decarboxylase/agmatine deiminase pathway)
(3 Reactions)



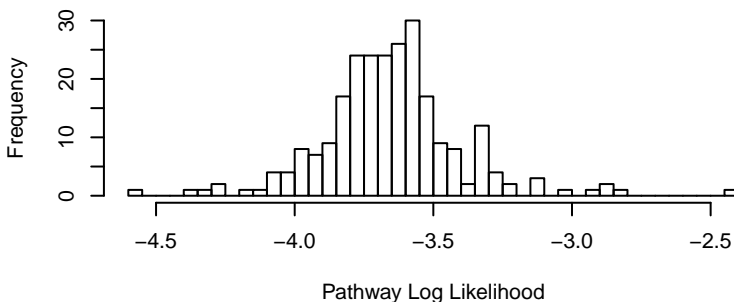
[48/3167] ARGDEG-IV-PWY
L-arginine degradation VIII (arginine oxidase pathway)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

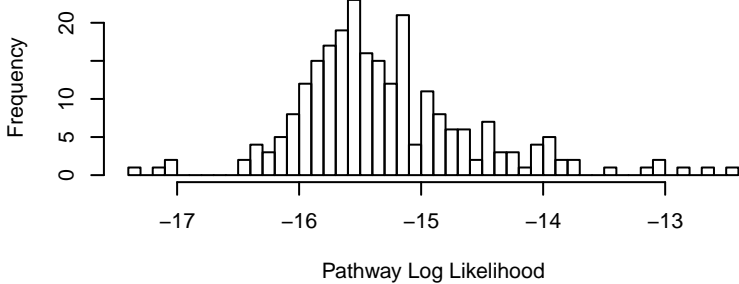
[49/3167] ARGDEG-V-PWY
L-arginine degradation X (arginine monooxygenase pathway)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[50/3167] ARGDEGRAD-PWY
L-arginine degradation V (arginine deiminase pathway)
(1 Reactions)



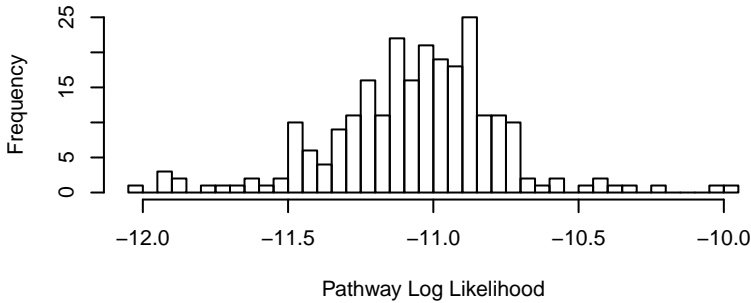
[51/3167] ARGININE-SYN4-PWY
L-ornithine biosynthesis II
(4 Reactions)



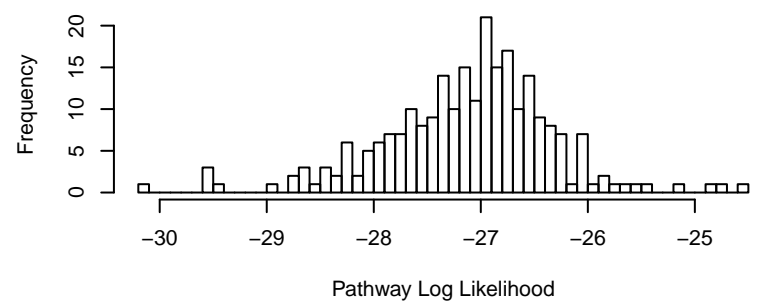
[52/3167] ARGSPECAT-PWY
spermine biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

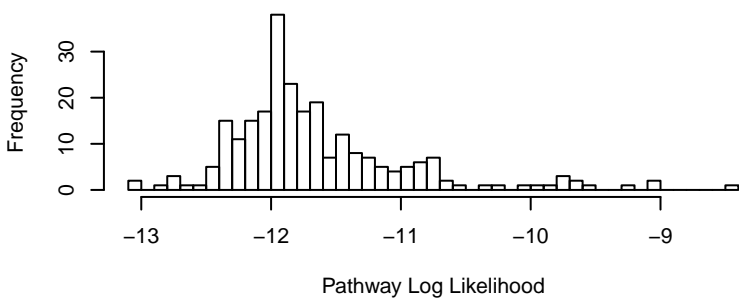
[53/3167] ARGSYN-PWY
L-arginine biosynthesis I (via L-ornithine)
(4 Reactions)



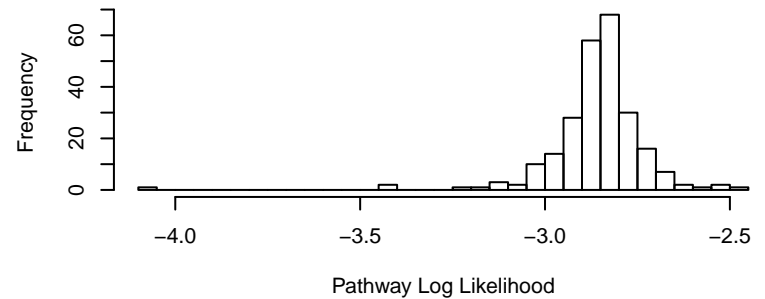
[54/3167] ARGSYNBSUB-PWY
L-arginine biosynthesis II (acetyl cycle)
(9 Reactions)



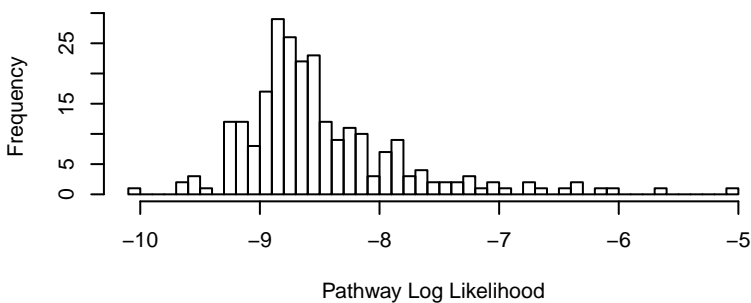
[55/3167] ASNSYNB-RXN
(3 Reactions)



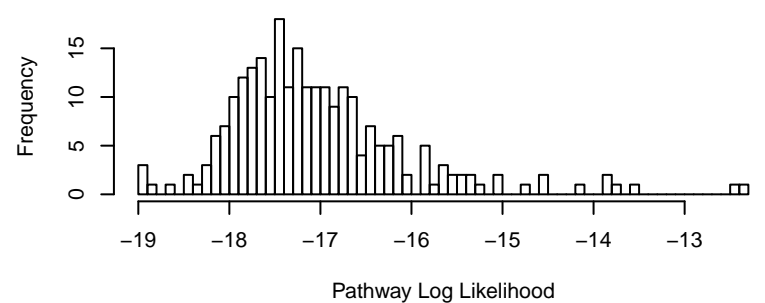
[56/3167] ASPARAGINE-BIOSYNTHESIS
L-asparagine biosynthesis I
(1 Reactions)



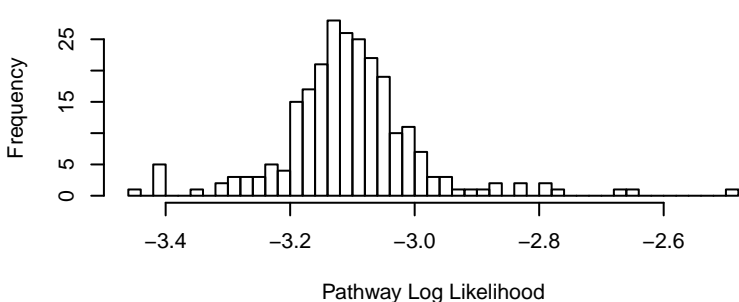
[57/3167] ASPARAGINE-DEG1-PWY
L-asparagine degradation I
(2 Reactions)



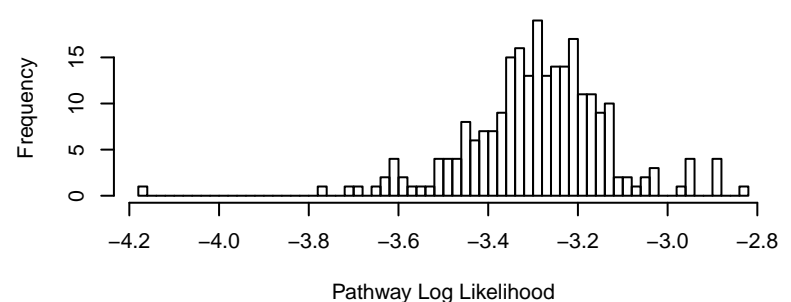
[58/3167] ASPARAGINE-DEG1-PWY-1
L-asparagine degradation III (mammalian)
(4 Reactions)

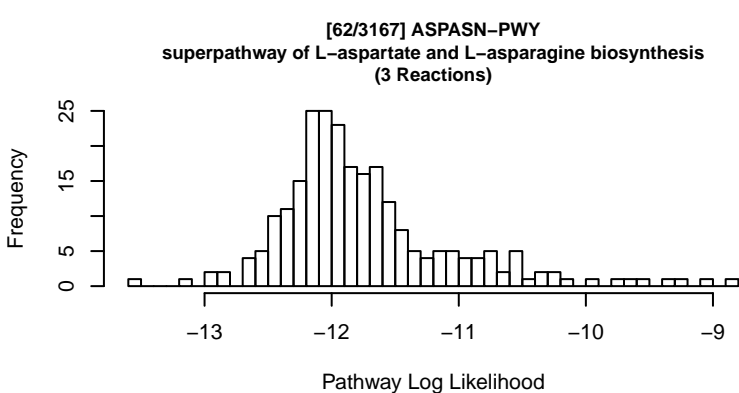
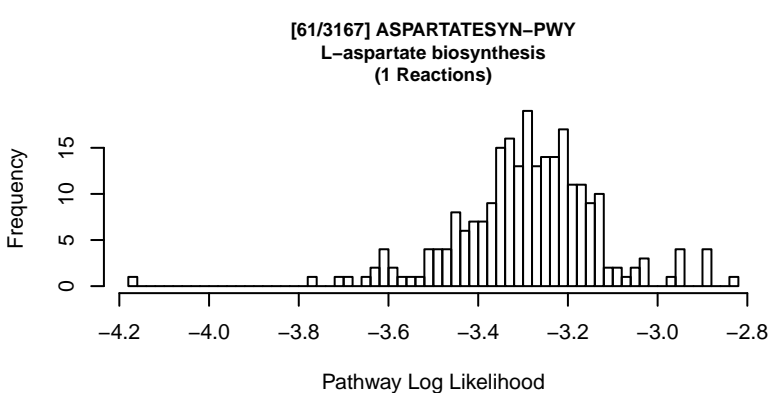


[59/3167] ASPARAGINESYN-PWY
L-asparagine biosynthesis II
(1 Reactions)



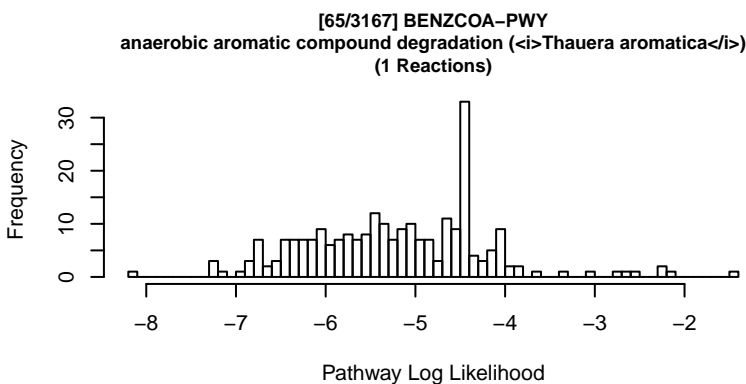
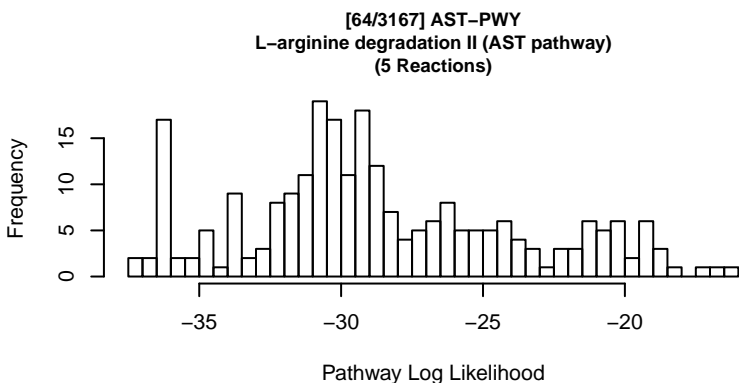
[60/3167] ASPARTATE-DEG1-PWY
L-aspartate degradation I
(1 Reactions)





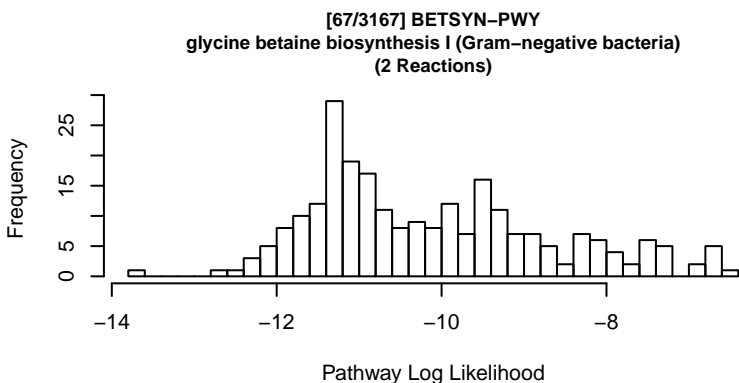
[63/3167] ASPSYNII-PWY
cyanide detoxification I
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



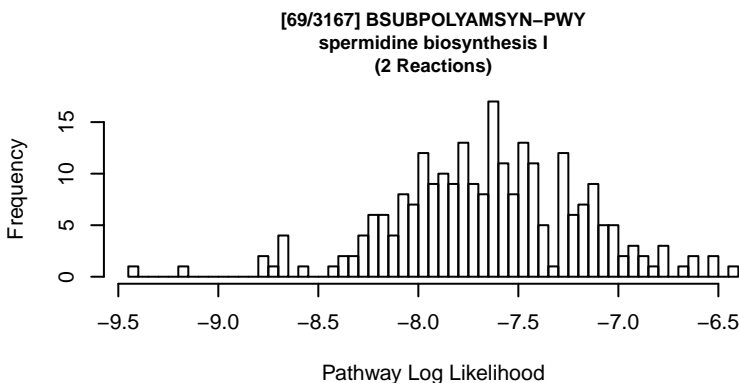
[66/3167] BETA-ALA-DEGRADATION-I-PWY
β-alanine degradation I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[68/3167] BGALACT-PWY
lactose degradation III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



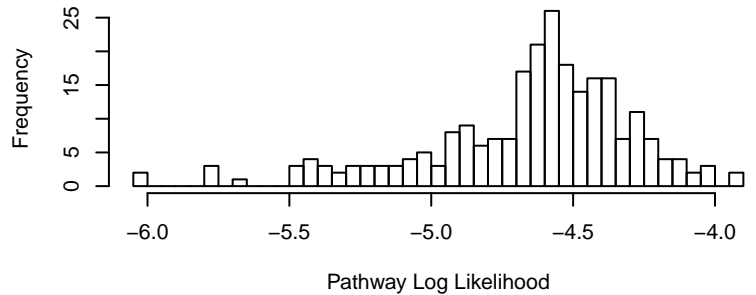
[70/3167] CALVIN-PWY
Calvin-Benson-Bassham cycle
(11 Reactions)

Zeros/-Inf for reaction(s) in Pathway

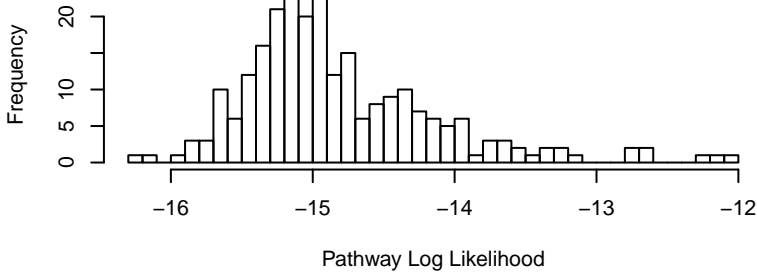
[71/3167] CAMALEXIN-SYN
camalexin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

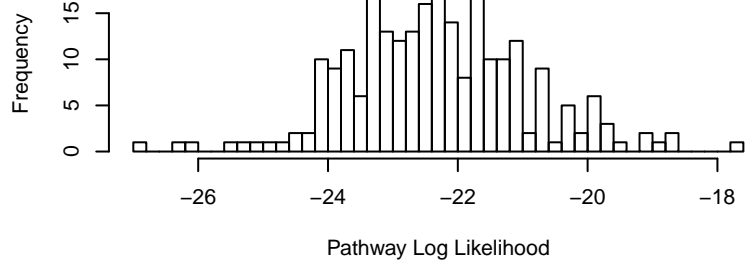
[72/3167] CARBAMOYL-SERINE-AMMONIA-LYASE-RXN
(1 Reactions)



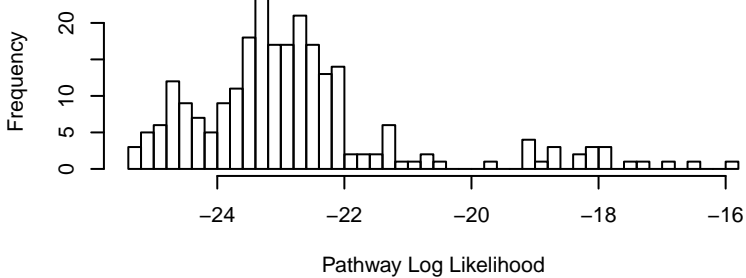
[73/3167] CARBPSYN-RXN
(3 Reactions)



[74/3167] CARNMET-PWY
L-carnitine respiration
(4 Reactions)



[75/3167] CATECHOL-ORTHO-CLEAVAGE-PWY
catechol degradation to β -ketoadipate
(4 Reactions)



[76/3167] CDHMSARC-RXN
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[77/3167] CENTBENZCOA-PWY
benzoyl-CoA degradation II (anaerobic)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

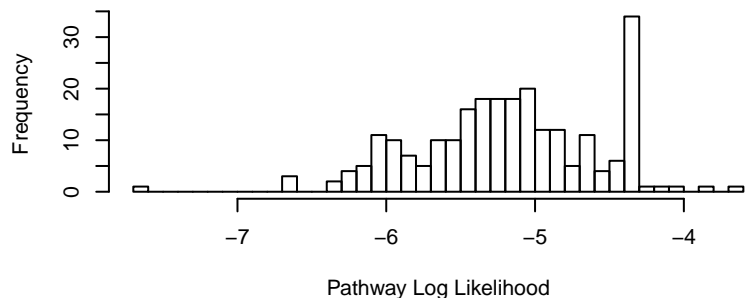
[78/3167] CENTFERM-PWY
pyruvate fermentation to butanoate
(9 Reactions)

Missing 2 Reaction(s) from Pathway.

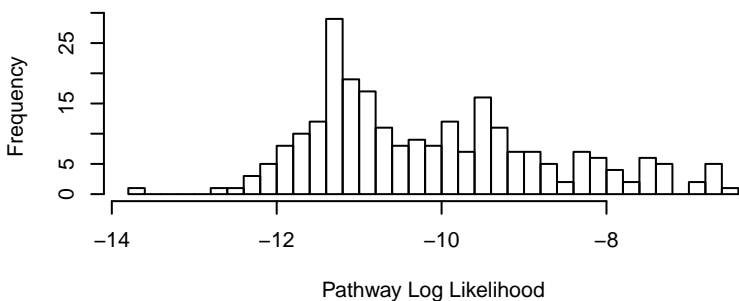
[79/3167] CHLOROPHYLL-SYN
3,8-divinyl-chlorophyllide biosynthesis I (aerobic, light-dependent)
(6 Reactions)

Zeros/-Inf for reaction(s) in Pathway

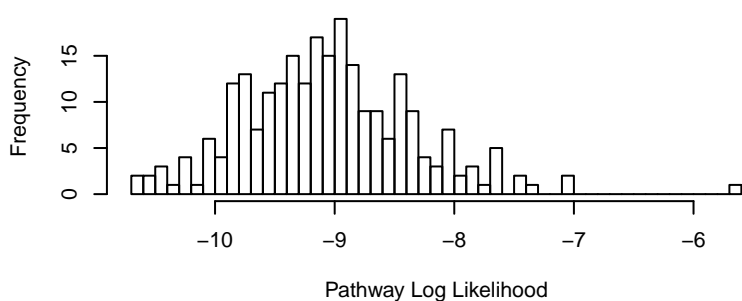
[80/3167] CHOLESTEROL-OXIDASE-RXN
(1 Reactions)



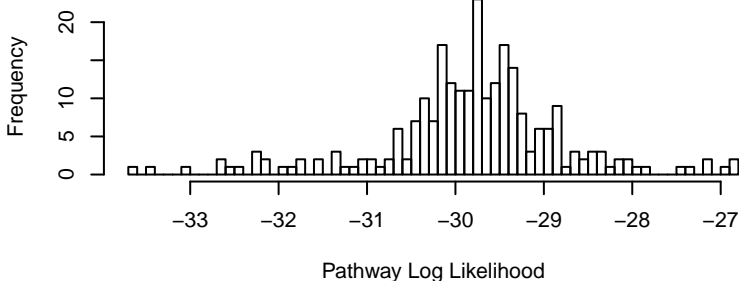
[81/3167] CHOLINE-BETAIN-ANA-PWY
choline degradation I
(2 Reactions)



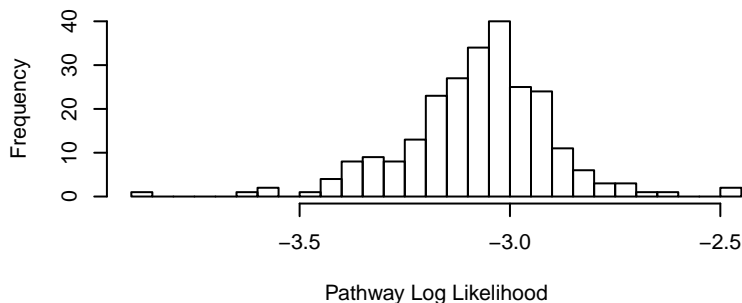
[82/3167] CITLY-RXN
(2 Reactions)



[83/3167] CITRULBIO-PWY
L-citrulline biosynthesis
(8 Reactions)



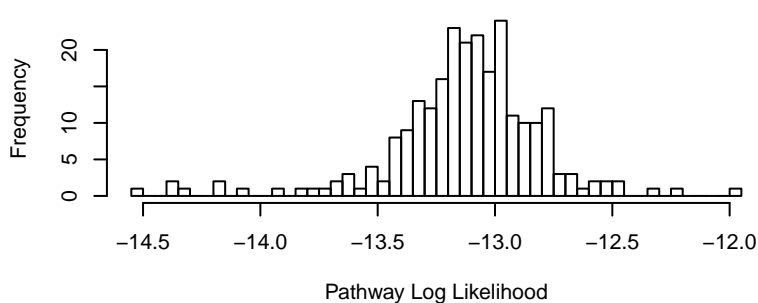
[84/3167] CITRULLINE-DEG-PWY
L-citrulline degradation
(1 Reactions)



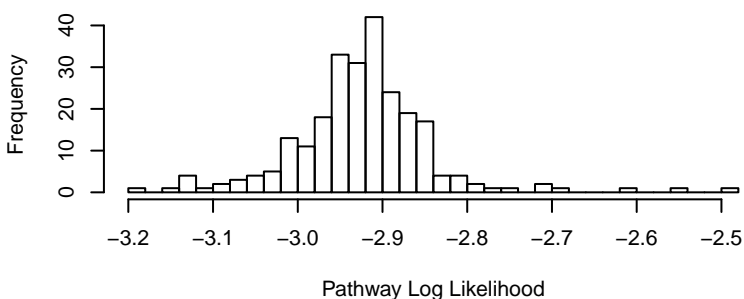
[85/3167] CO2FORM-PWY
methanogenesis from methanol
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

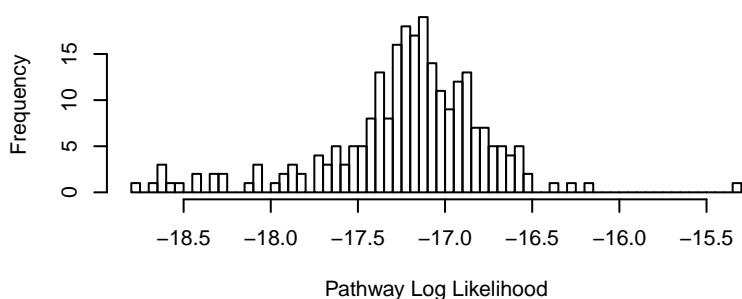
[86/3167] COA-PWY
coenzyme A biosynthesis I (prokaryotic)
(4 Reactions)



[87/3167] COA-PWY-1
superpathway of coenzyme A biosynthesis III (mammals)
(1 Reactions)



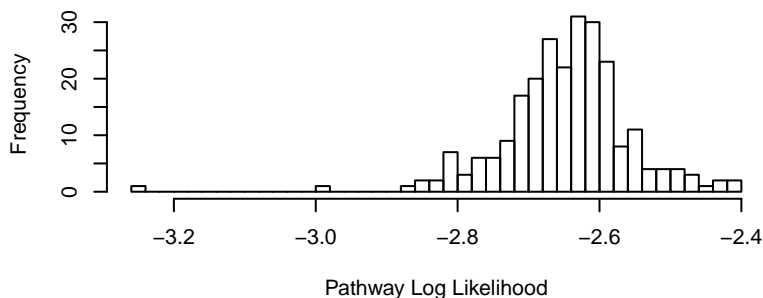
[88/3167] COBALSYN-PWY
superpathway of adenosylcobalamin salvage from cobinamide I
(5 Reactions)



[89/3167] CODH-PWY
reductive acetyl coenzyme A pathway I (homoacetogenic bacteria)
(10 Reactions)

Missing 4 Reaction(s) from Pathway.

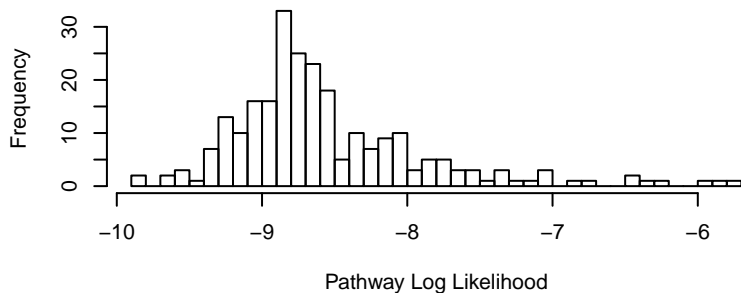
[90/3167] COLANSYN-PWY
colanic acid building blocks biosynthesis
(1 Reactions)



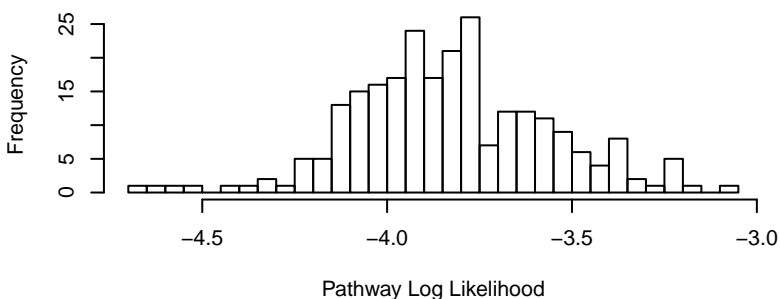
[91/3167] CRNFORCAT-PWY
creatinine degradation I
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[92/3167] CTPSYN-RXN
(2 Reactions)



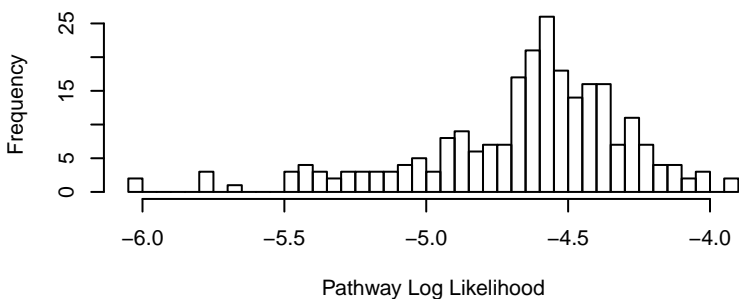
[93/3167] CYANCAT-PWY
cyanate degradation
(1 Reactions)



[94/3167] CYCLOHEXANOL-OXIDATION-PWY
cyclohexanol degradation
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

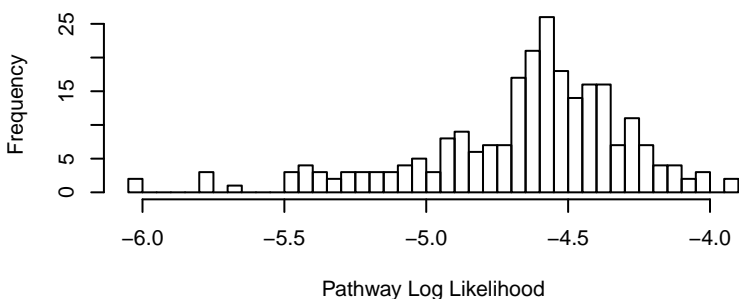
[95/3167] CYSTATHIONINE-BETA-LYASE-RXN
(1 Reactions)



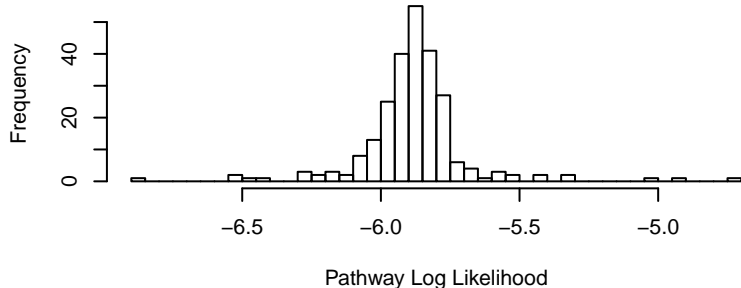
[96/3167] CYSTEINE-DEG-PWY
L-cysteine degradation I
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

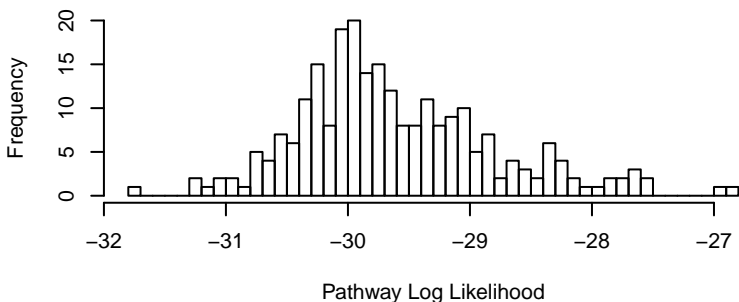
[97/3167] CYSTHIOCYS-RXN
(1 Reactions)



[98/3167] CYSTSYN-PWY
L-cysteine biosynthesis I
(2 Reactions)



[99/3167] DAPLYSINESYN-PWY
L-lysine biosynthesis I
(9 Reactions)



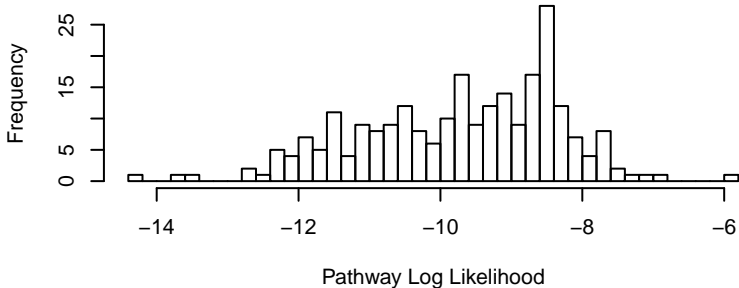
[100/3167] DARABCAT-PWY
D-arabinose degradation II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

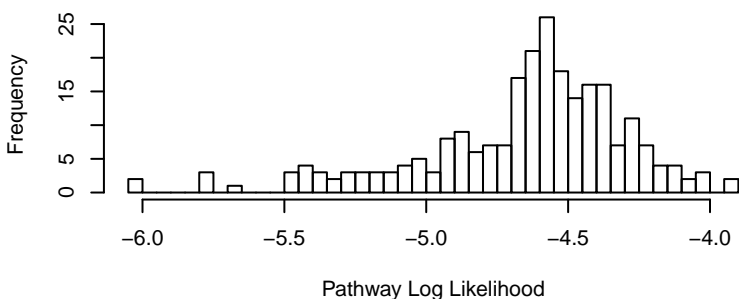
[101/3167] DARABCATK12-PWY
D-arabinose degradation I
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

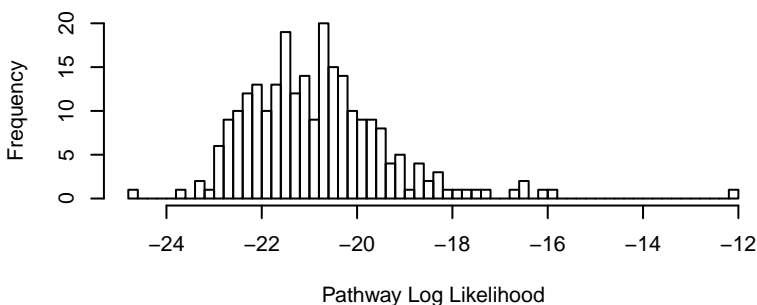
[102/3167] DARABITOLUTIL-PWY
D-arabitol degradation
(2 Reactions)



[103/3167] DCYSDSULF-RXN
(1 Reactions)



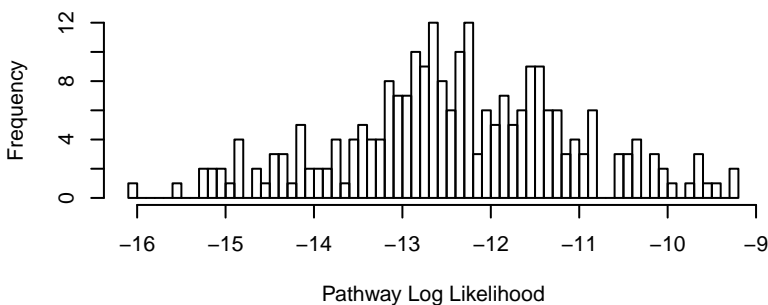
[104/3167] DENITRIFICATION-PWY
nitrate reduction I (denitrification)
(4 Reactions)



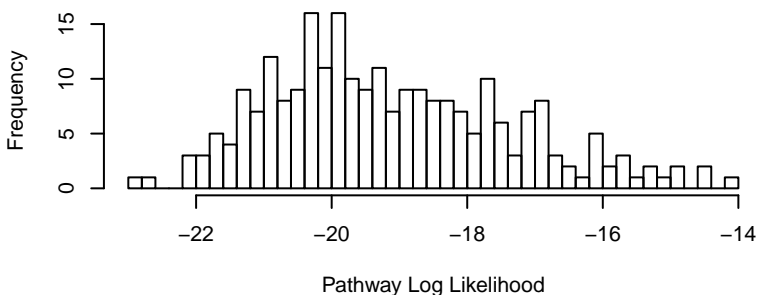
[105/3167] DESULFONATION-PWY
benzenesulfonate degradation
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[106/3167] DETOX1-PWY
superoxide radicals degradation
(3 Reactions)



[107/3167] DETOX1-PWY-1
reactive oxygen species degradation
(4 Reactions)



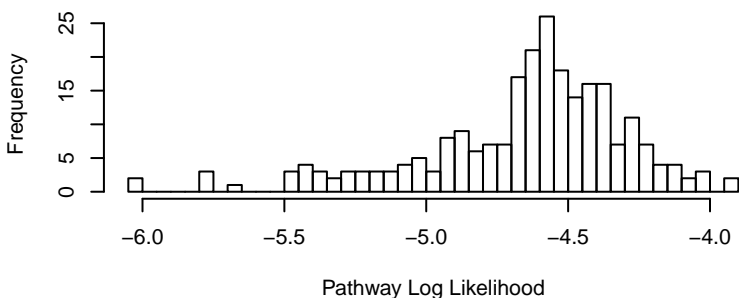
[108/3167] DHGLUCONATE-PYR-CAT-PWY
glucose degradation (oxidative)
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

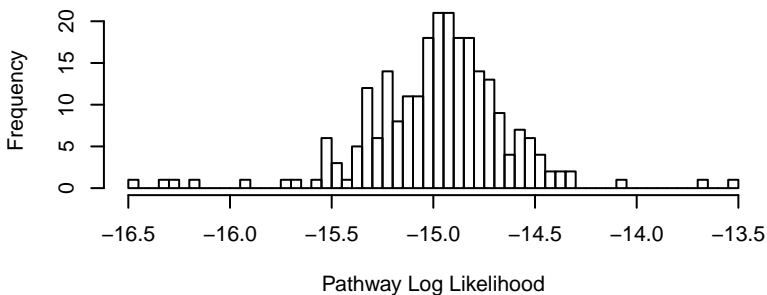
[109/3167] DISSULFRED-PWY
dissimilatory sulfate reduction I (to hydrogen sulfide)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

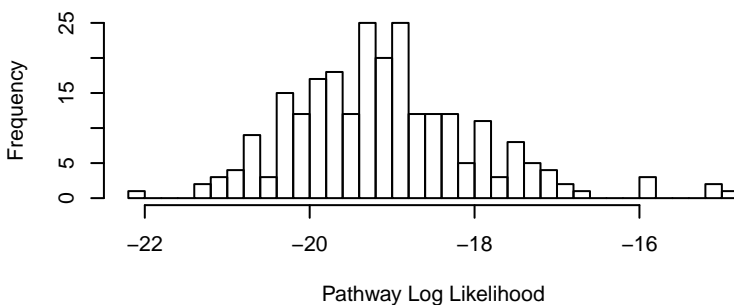
[110/3167] DSERDEAM-RXN
(1 Reactions)



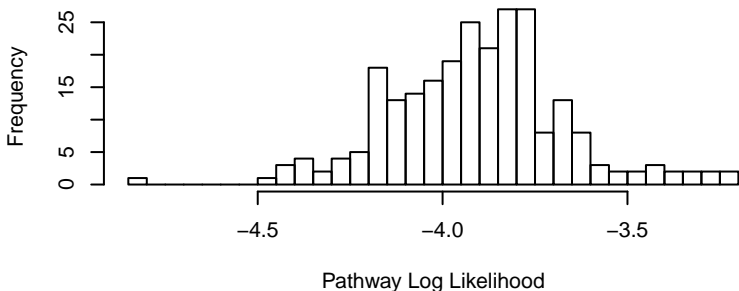
[111/3167] DTPRHAMSYN-PWY
dTDP-β-L-rhamnose biosynthesis
(5 Reactions)



[112/3167] ECASYN-PWY
enterobacterial common antigen biosynthesis
(4 Reactions)



[113/3167] ENTBACSYN-PWY
enterobactin biosynthesis
(1 Reactions)



[114/3167] ENTMULTI-RXN
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

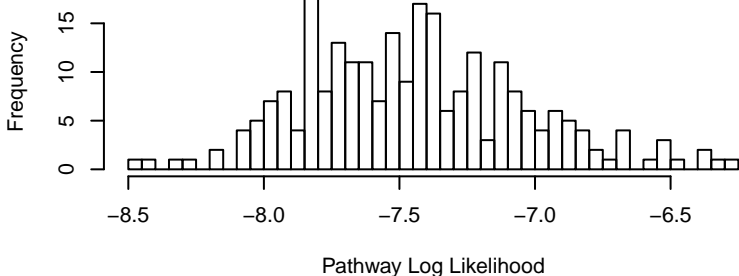
[115/3167] ENTNER-DOUDOROFF-PWY
Entner-Doudoroff shunt
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

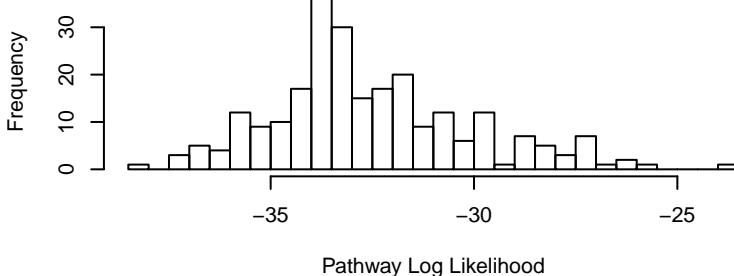
[116/3167] ETHYL-PWY
ethene biosynthesis I (plants)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[117/3167] ETOH-ACETYLCOA-ANA-PWY
ethanol degradation I
(2 Reactions)



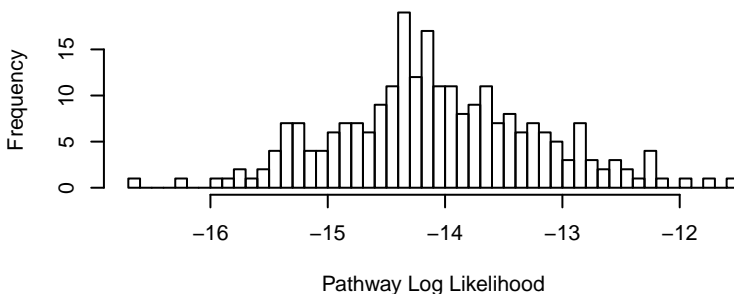
[118/3167] FAO-PWY
fatty acid β-oxidation I (generic)
(7 Reactions)

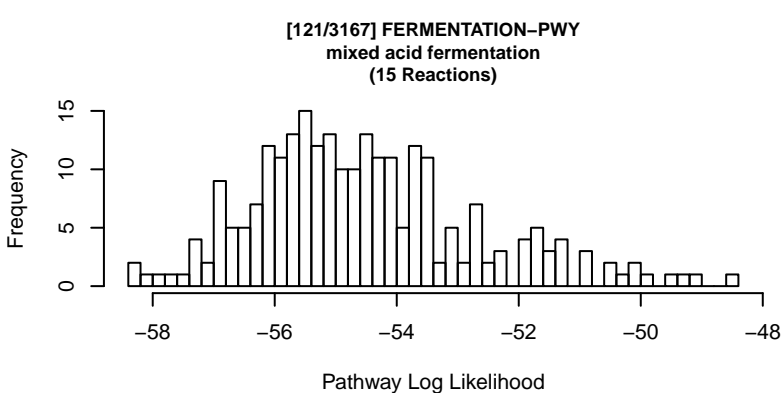


[119/3167] FASYN-ELONG-PWY
fatty acid elongation -- saturated
(8 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[120/3167] FASYN-INITIAL-PWY
superpathway of fatty acid biosynthesis initiation (E. coli)
(3 Reactions)



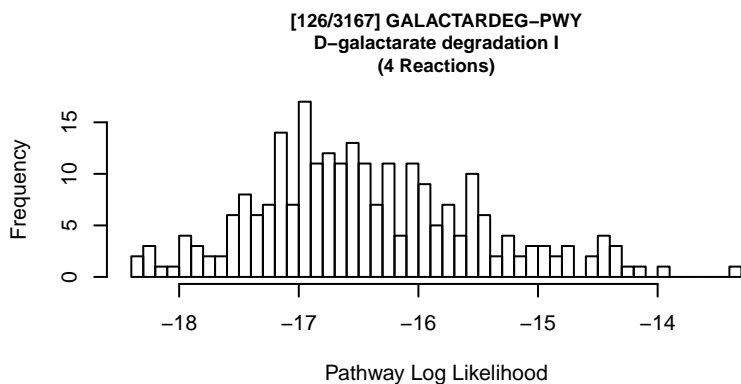
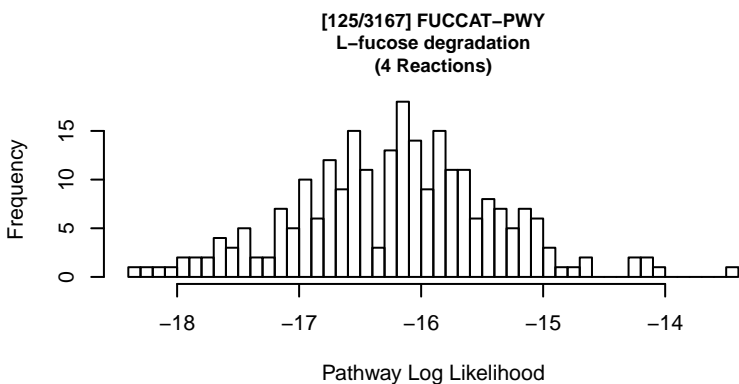
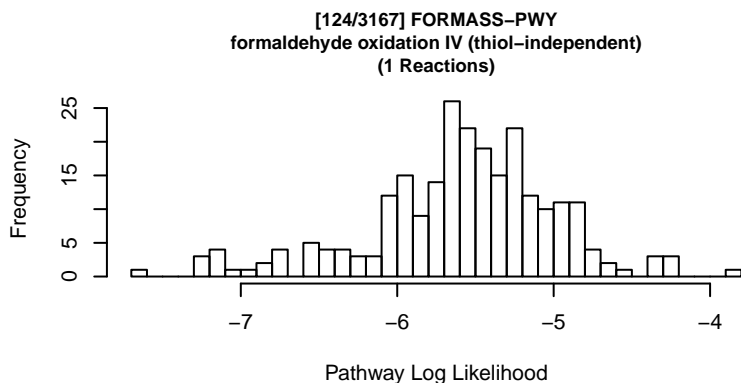


[122/3167] FHLMULTI-RXN
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

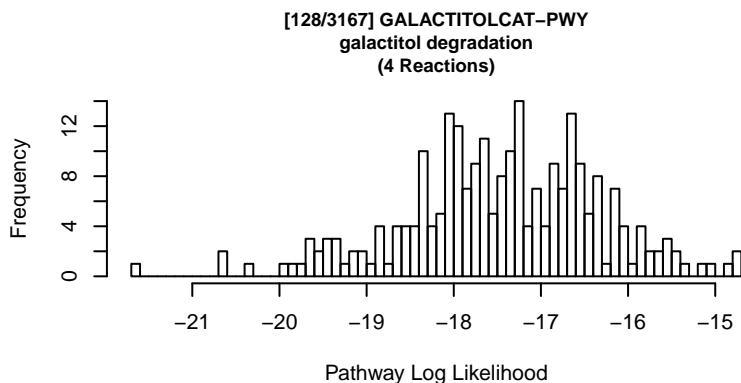
[123/3167] FLUORENE-DEG-9-ONE-PWY
fluorene degradation I
(3 Reactions)

Missing 2 Reaction(s) from Pathway.



[127/3167] GALACTCAT-PWY
D-galactonate degradation
(6 Reactions)

Missing 3 Reaction(s) from Pathway.



[129/3167] GALACTUROCAT-PWY
D-galacturonate degradation I
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

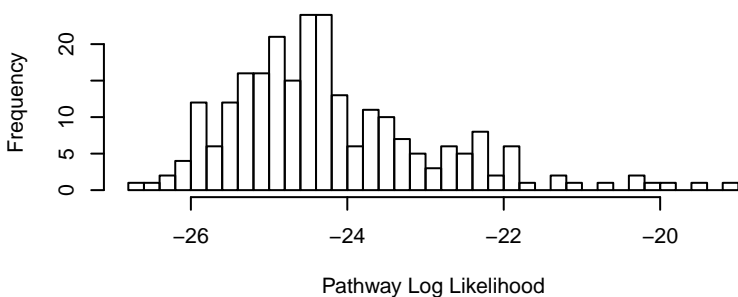
[130/3167] GALDEG-PWY
D-galactose degradation II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[131/3167] GALLATE-DEGRADATION-I-PWY
gallate degradation II
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

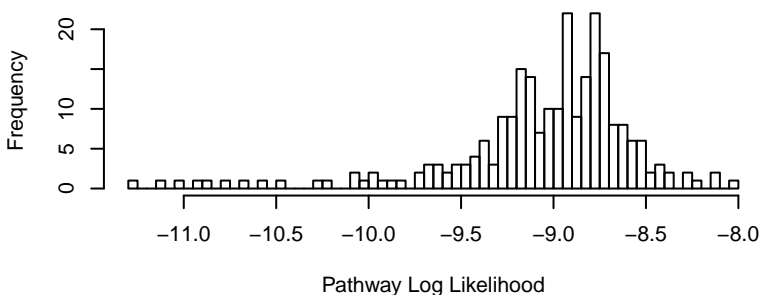
[132/3167] GALLATE-DEGRADATION-II-PWY
gallate degradation I
(4 Reactions)



[133/3167] GAMMAHEXCHLORDEG-PWY
γ-hexachlorocyclohexane degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

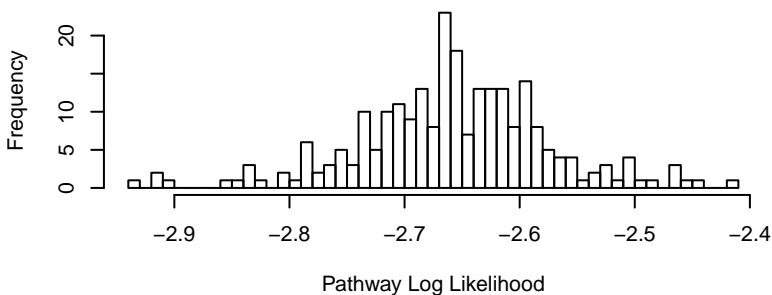
[134/3167] GCVMULTI-RXN
(3 Reactions)



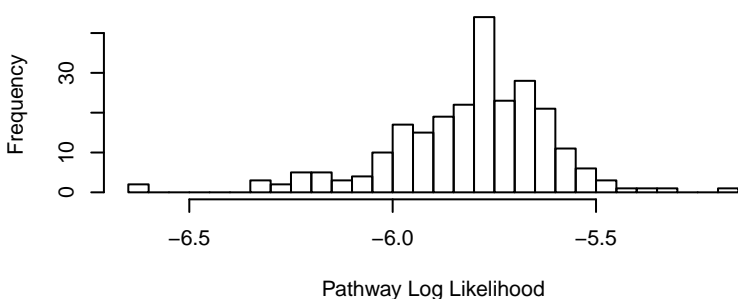
[135/3167] GDPRHAMSYN-PWY
GDP-D-rhamnose biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

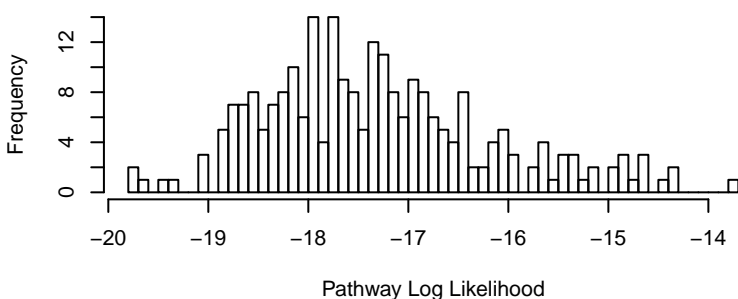
[136/3167] GLNSYN-PWY
L-glutamine biosynthesis I
(1 Reactions)



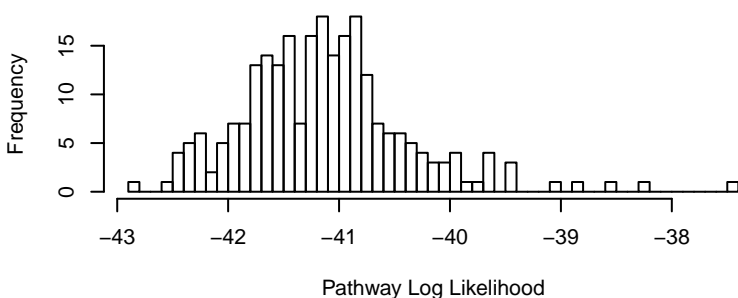
[137/3167] GLUAMCAT-PWY
<i>N</i>-acetylglucosamine degradation I
(2 Reactions)



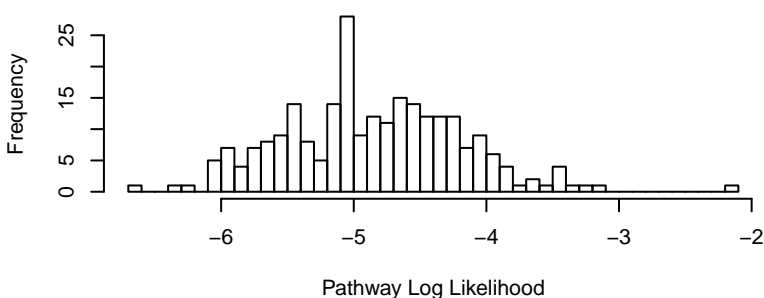
[138/3167] GLUCARDEG-PWY
<i>D</i>-glucarate degradation I
(4 Reactions)



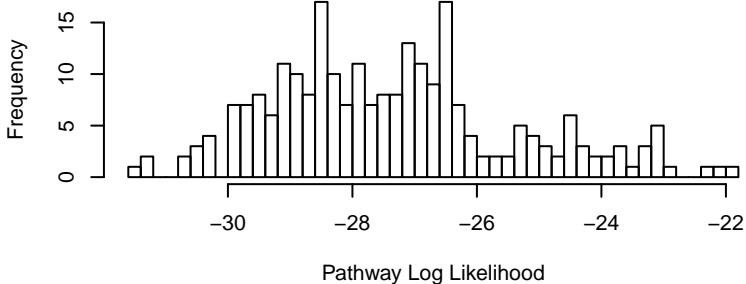
[139/3167] GLUCONEO-PWY
gluconeogenesis I
(13 Reactions)



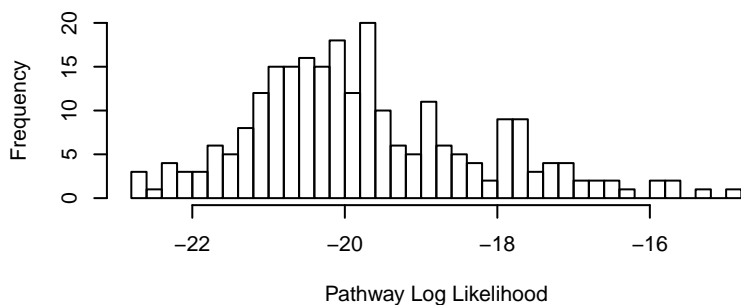
[140/3167] GLUCONSUPER-PWY
D-gluconate degradation
(1 Reactions)



[141/3167] GLUCOSE1PMETAB-PWY
glucose and glucose-1-phosphate degradation
(6 Reactions)



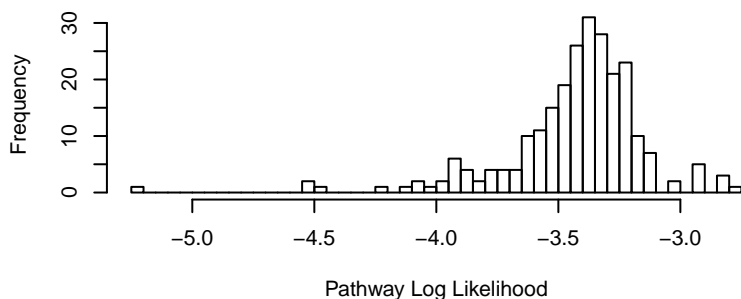
[142/3167] GLUDEG-I-PWY
GABA shunt
(4 Reactions)



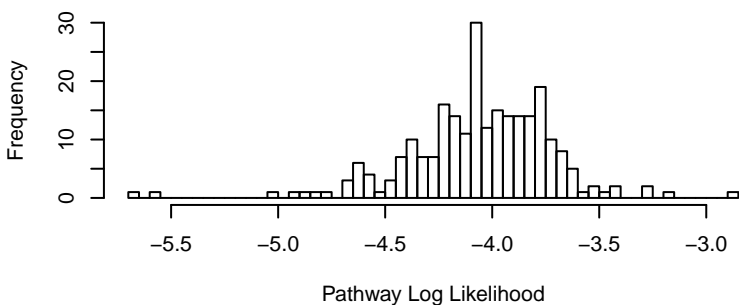
[143/3167] GLUDEG-II-PWY
L-glutamate degradation VII (to butanoate)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

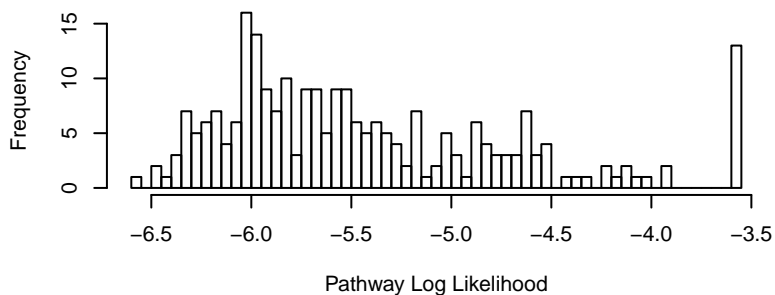
[144/3167] GLUGLNSYN-PWY
L-glutamate biosynthesis IV
(1 Reactions)



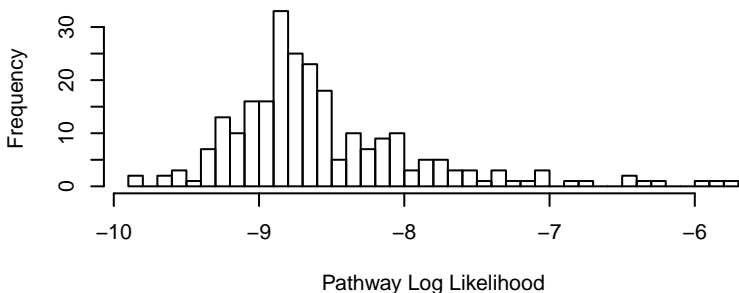
[145/3167] GLUTAMATE-DEG1-PWY
L-glutamate degradation I
(1 Reactions)



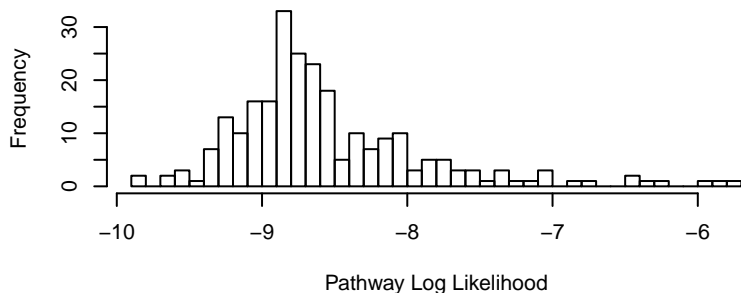
[146/3167] GLUTAMATE-SYN2-PWY
L-glutamate biosynthesis II
(1 Reactions)



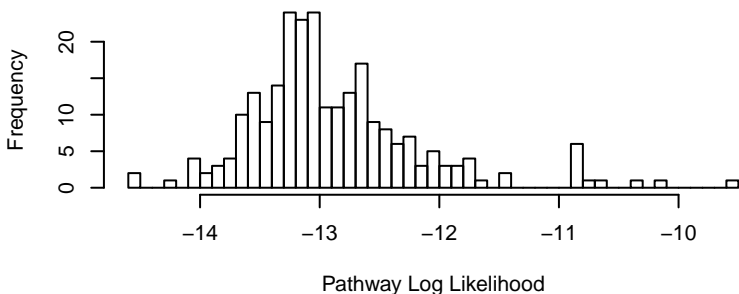
[147/3167] GLUTAMATE-SYNTHASE-FERREDOXIN-RXN
(2 Reactions)



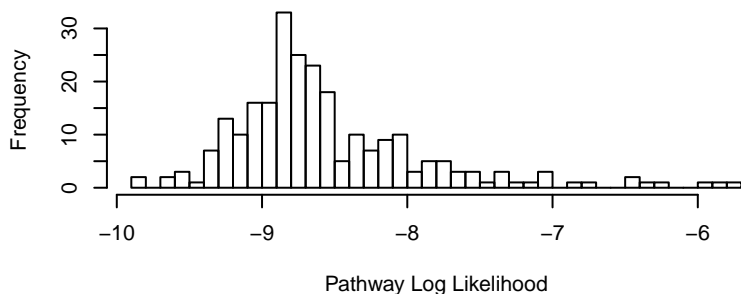
[148/3167] GLUTAMATE-SYNTHASE-NADH-RXN
(2 Reactions)

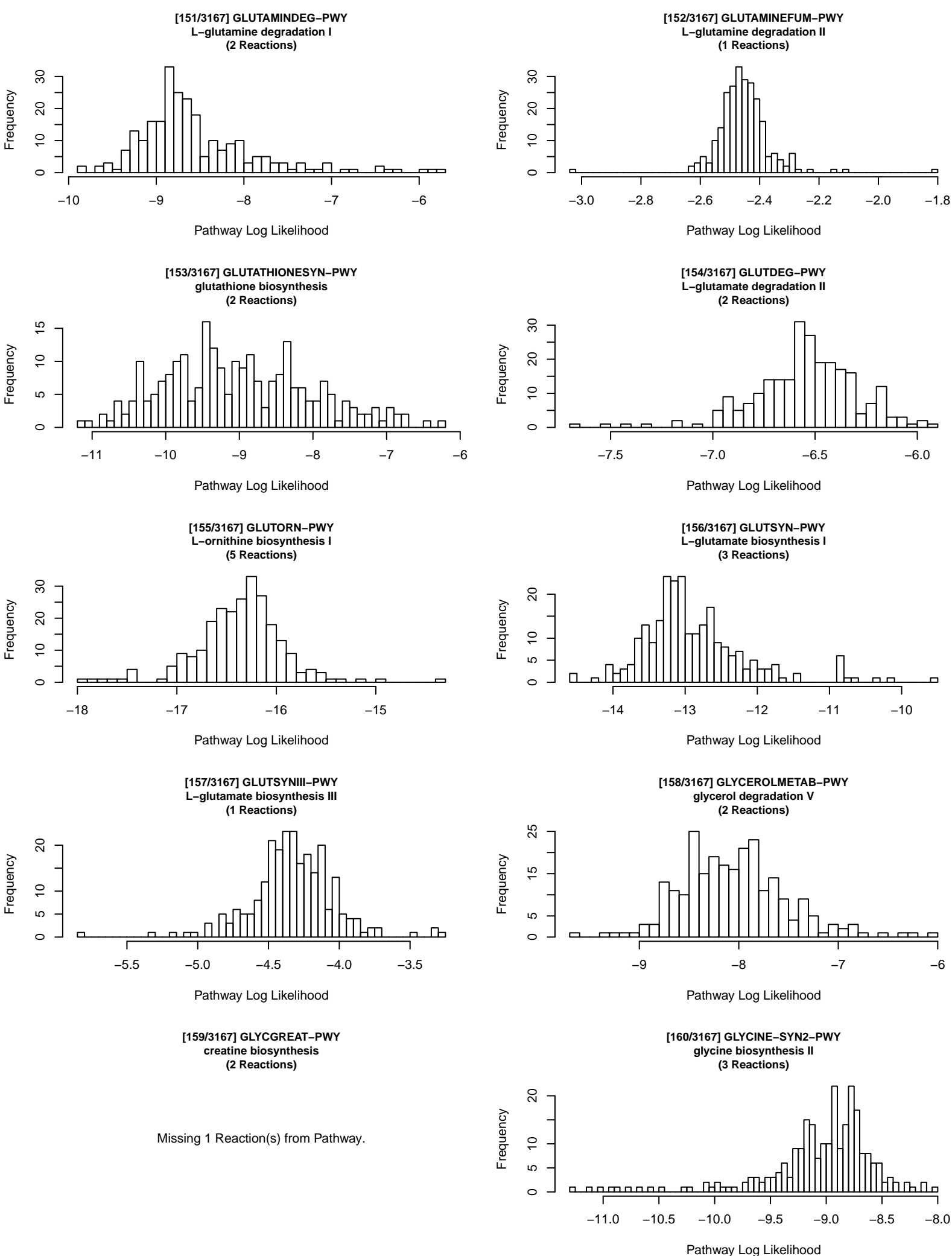


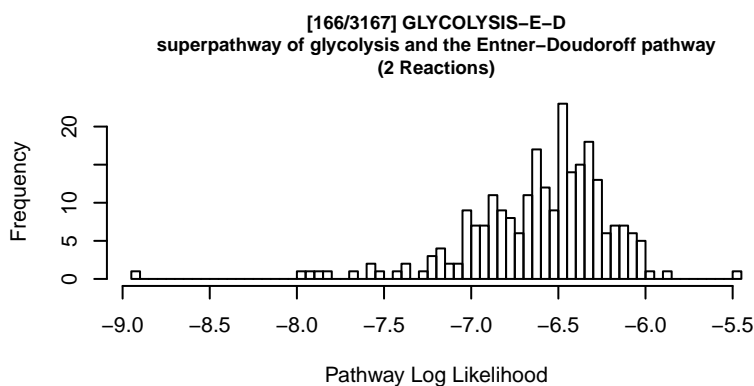
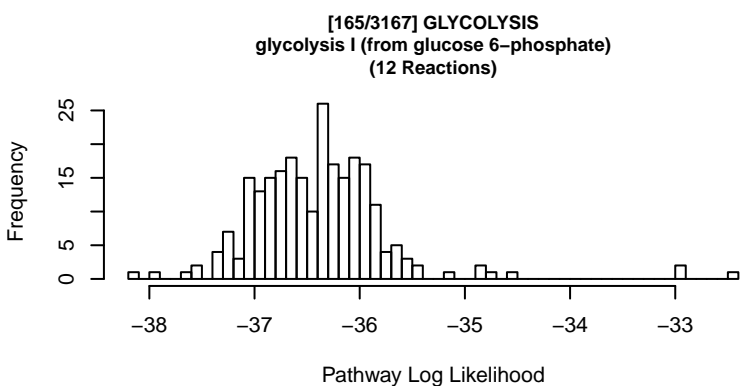
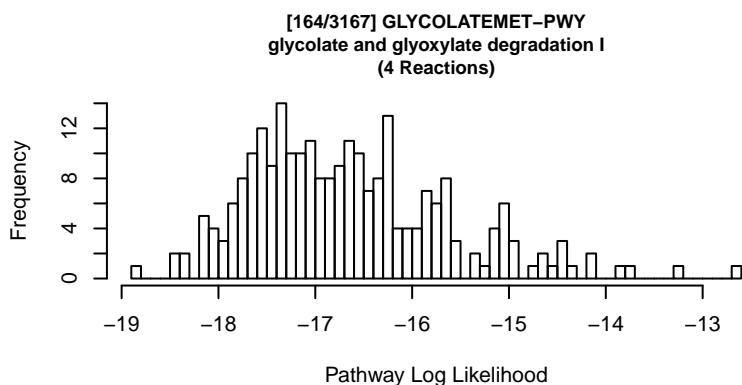
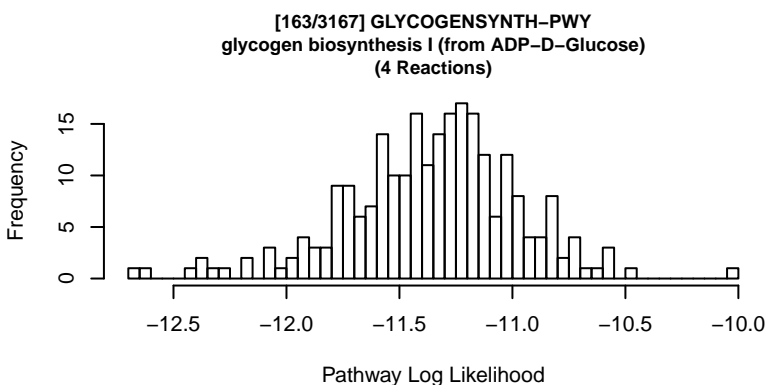
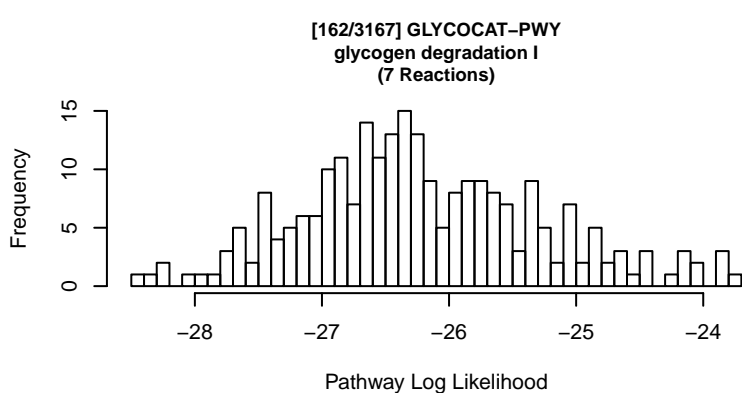
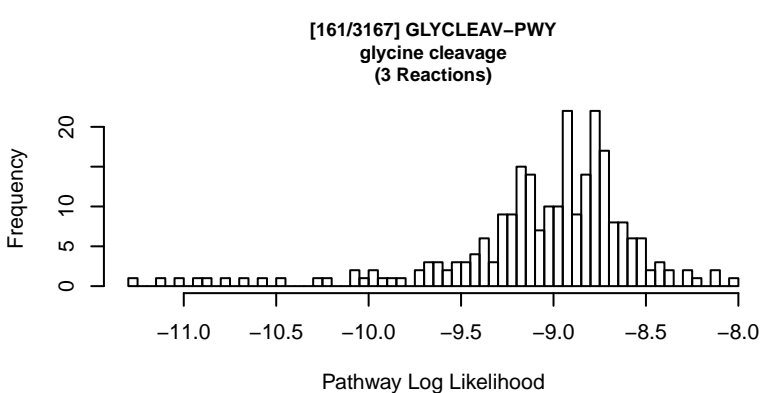
[149/3167] GLUTAMATESYN-RXN
(3 Reactions)



[150/3167] GLUTAMIDOTRANS-RXN
(2 Reactions)

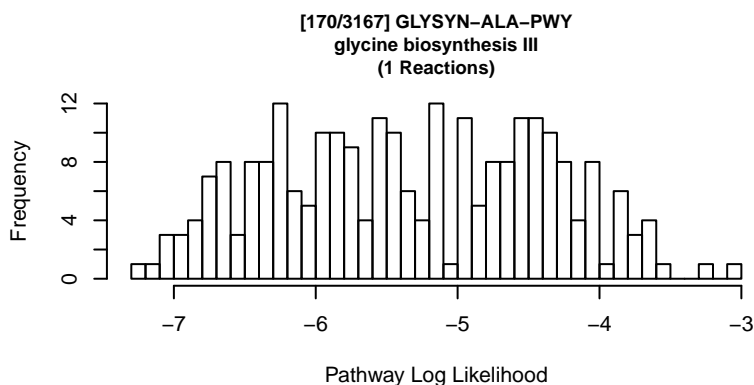
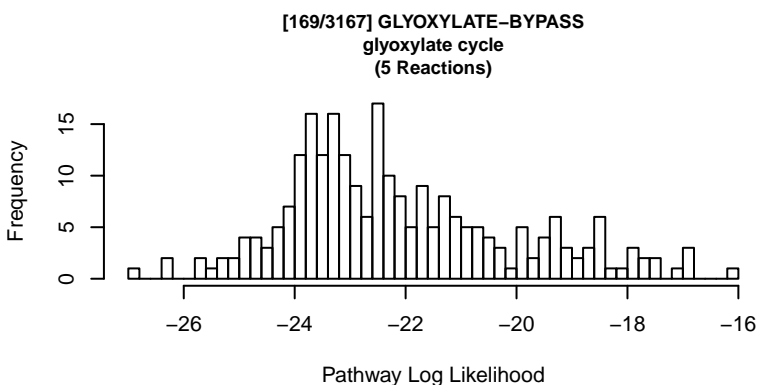
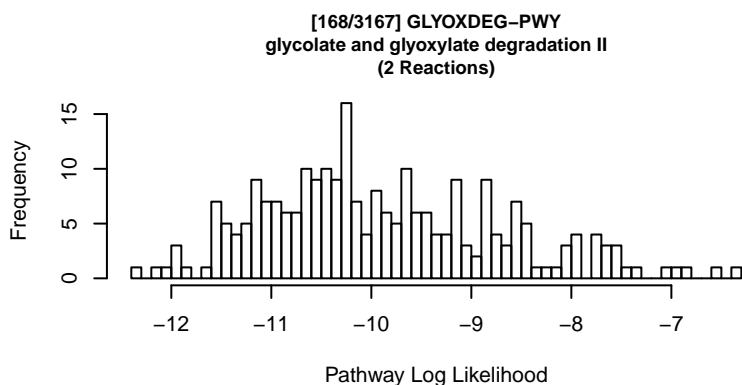


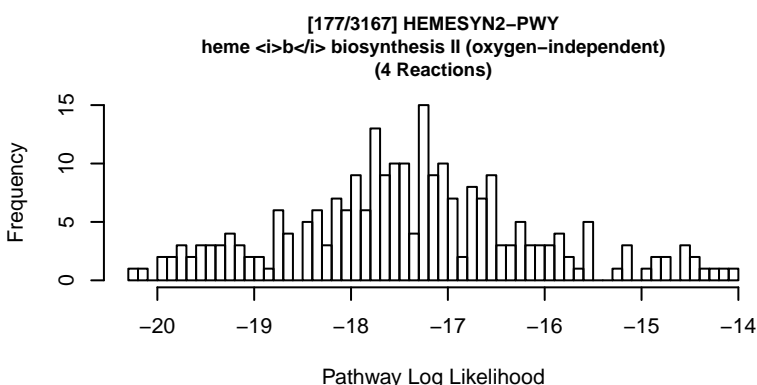
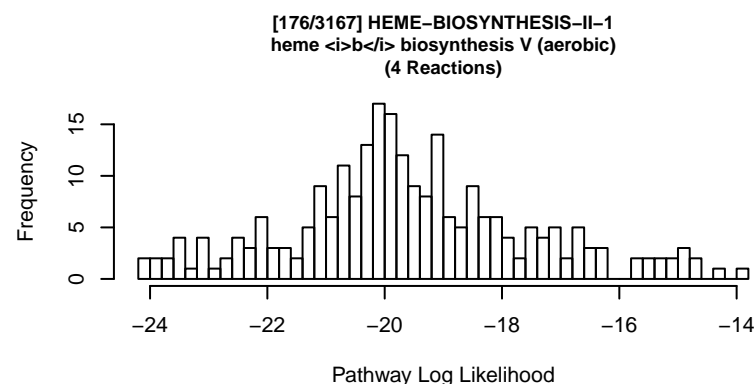
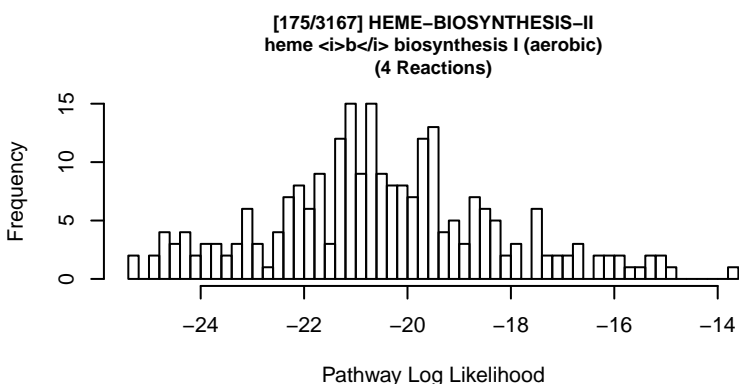
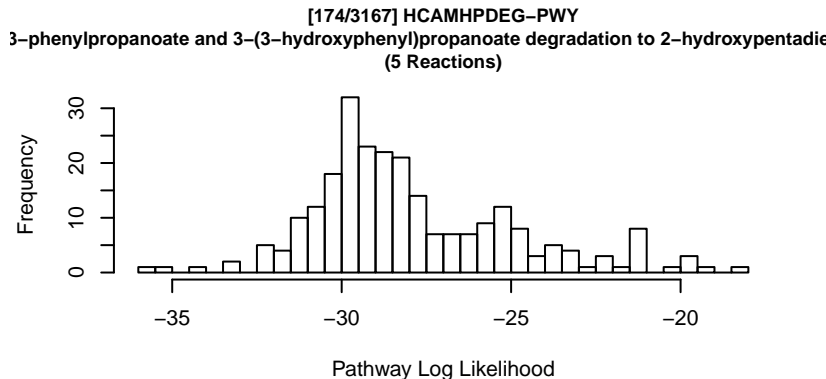
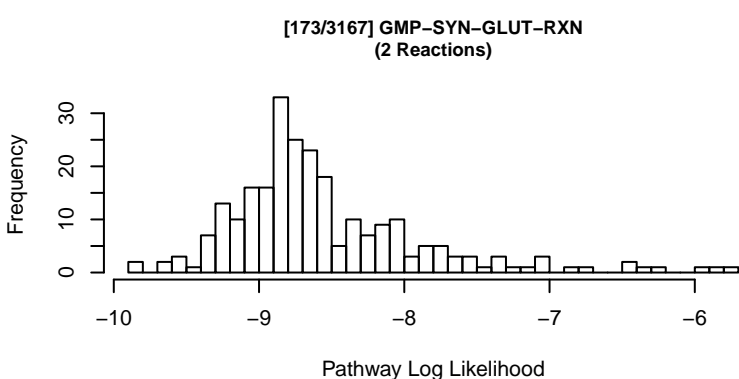
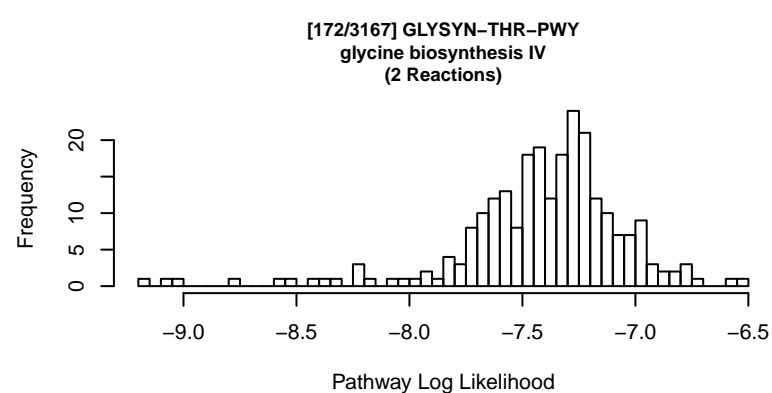
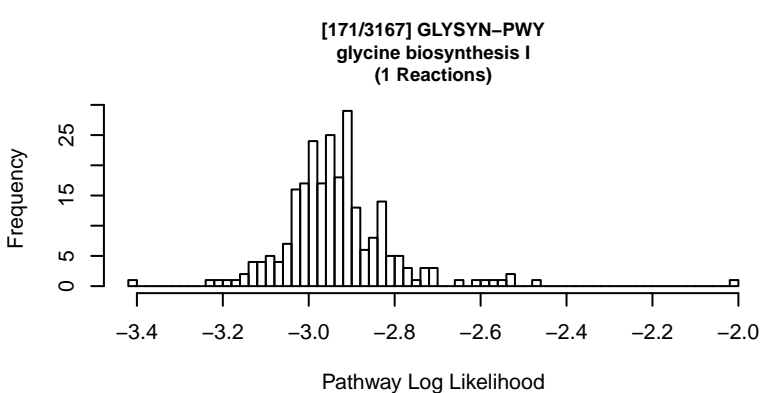




[167/3167] GLYCOLYSIS-TCA-GLYOX-BYPASS
superpathway of glycolysis, pyruvate dehydrogenase, TCA, and glyoxylate bypass
(1 Reactions)

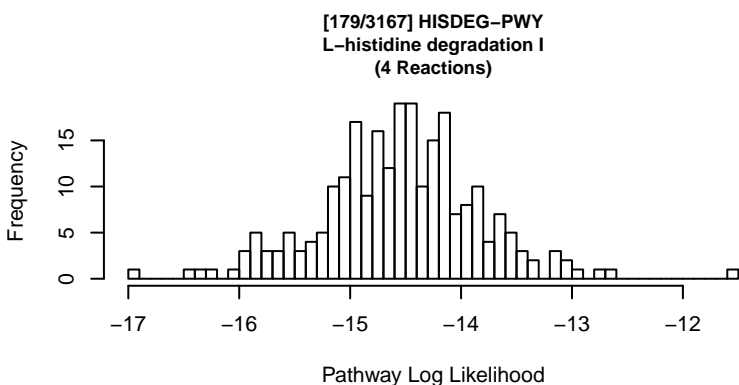
Missing ALL Reaction(s) from Pathway.





[178/3167] HEXPPSYN-PWY
hexaprenyl diphosphate biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway



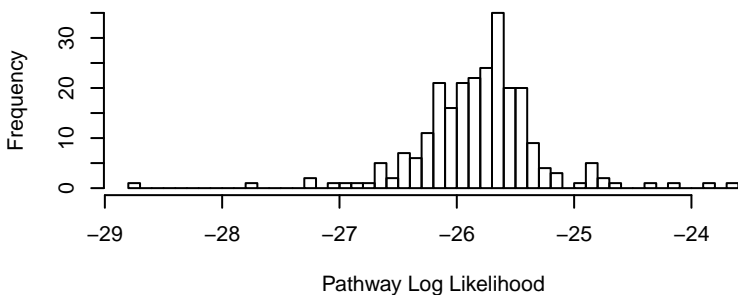
[180/3167] HISHP-PWY
L-histidine degradation VI
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

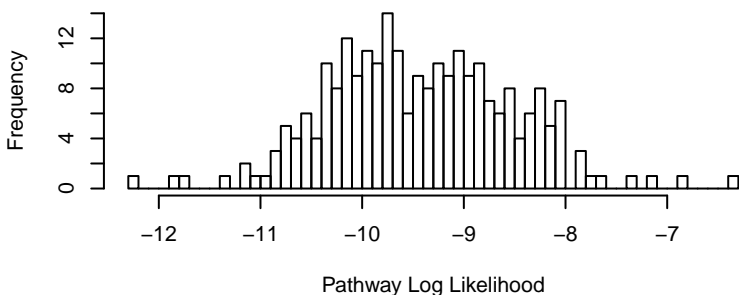
[181/3167] HISTDEG-PWY
L-histidine degradation IV
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

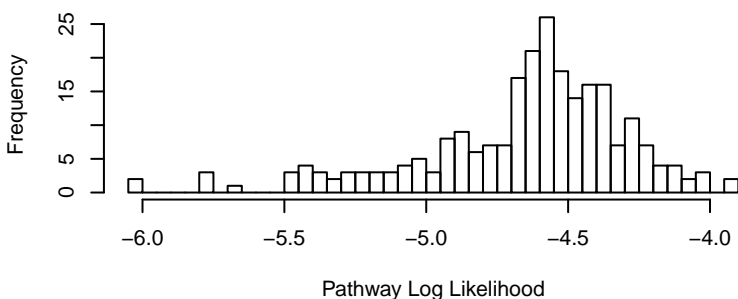
[182/3167] HISTSYN-PWY
L-histidine biosynthesis
(8 Reactions)



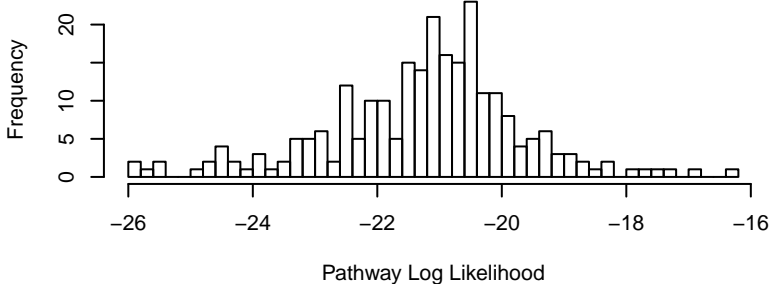
[183/3167] HOMOCYSDEGR-PWY
L-cysteine biosynthesis III (from L-homocysteine)
(2 Reactions)



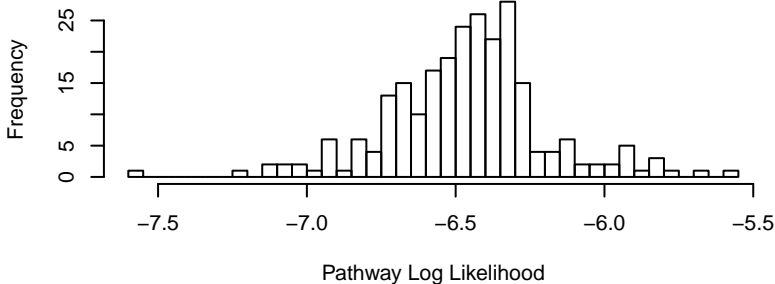
[184/3167] HOMOCYSTEINE-DESULFHYDRASE-RXN
(1 Reactions)



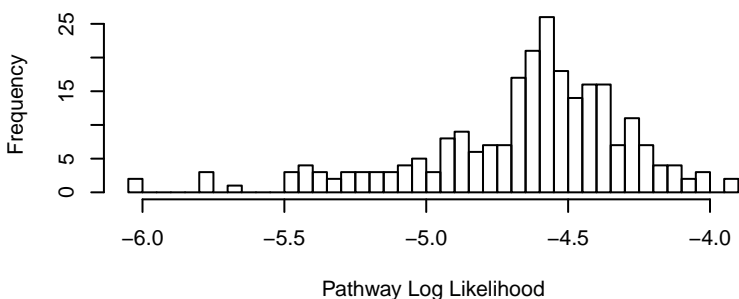
[185/3167] HOMOSER-METSYN-PWY
L-methionine biosynthesis I
(5 Reactions)



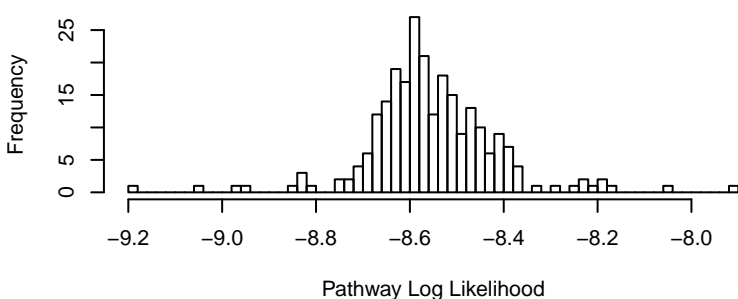
[186/3167] HOMOSER-THRESYN-PWY
L-threonine biosynthesis
(2 Reactions)



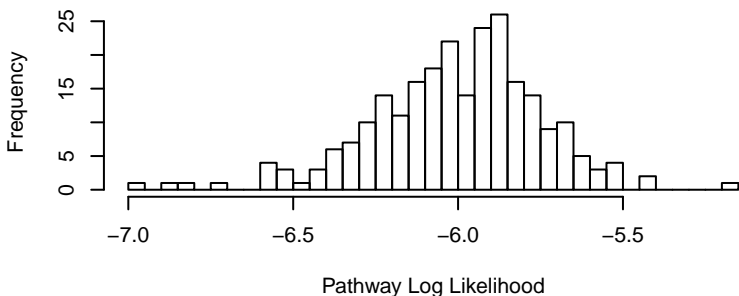
[187/3167] HOMOSERDEAM-RXN
(1 Reactions)



[188/3167] HOMOSERSYN-PWY
L-homoserine biosynthesis
(3 Reactions)



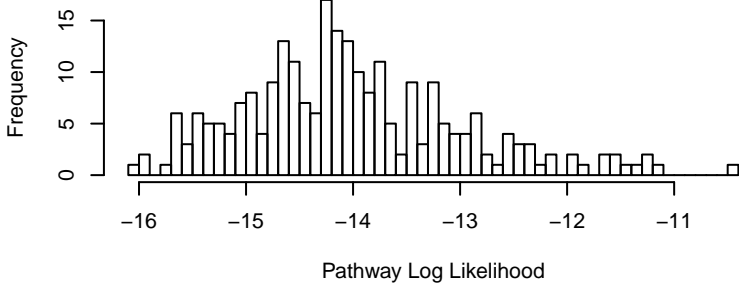
[189/3167] HSERMETANA-PWY
L-methionine biosynthesis III
(2 Reactions)



[190/3167] HYDROXYPRODEG-PWY
<i>trans</i>-4-hydroxy-L-proline degradation I
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

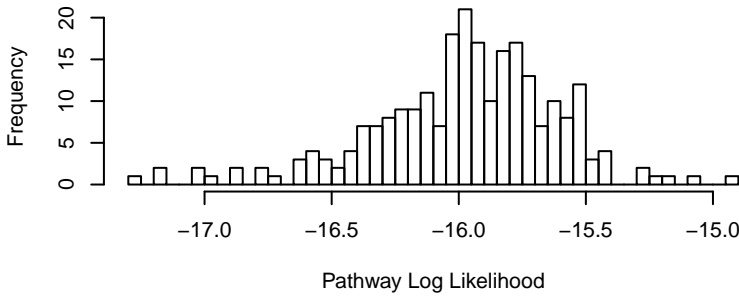
[191/3167] IDNCAT-PWY
L-idenate degradation
(3 Reactions)



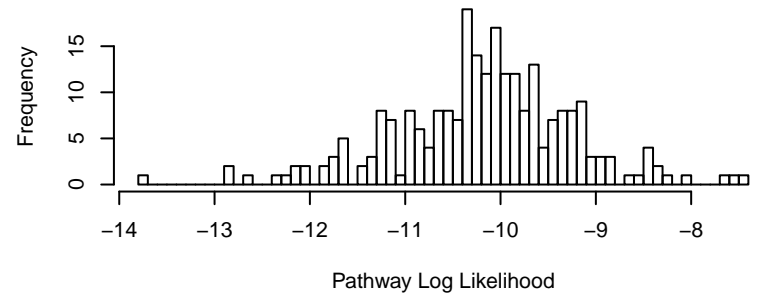
[192/3167] ILEUDEG-PWY
L-isoleucine degradation I
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

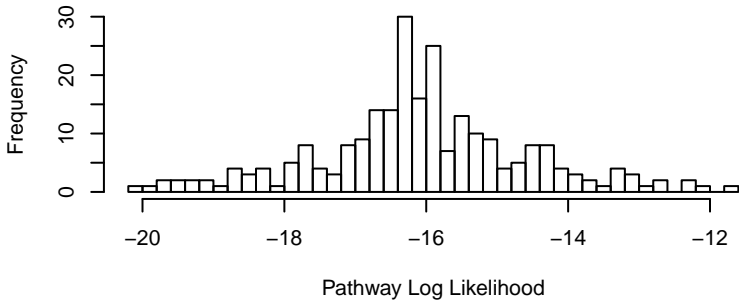
[193/3167] ILEUSYN-PWY
L-isoleucine biosynthesis I (from threonine)
(5 Reactions)



[194/3167] KDO-LIPASYN-PWY
(Kdo)₂-lipid A biosynthesis (*E. coli*)
(2 Reactions)



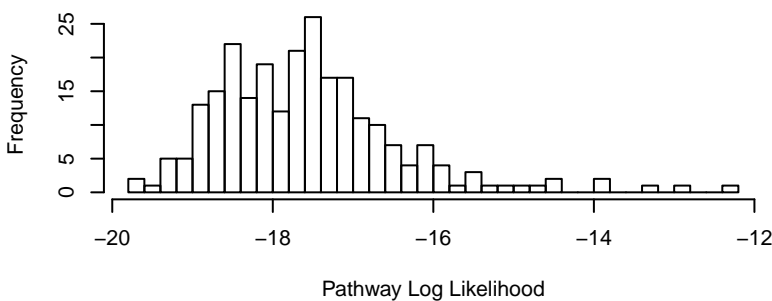
[195/3167] KDO-NAGLIPASYN-PWY
superpathway of (Kdo)₂-lipid A biosynthesis
(3 Reactions)



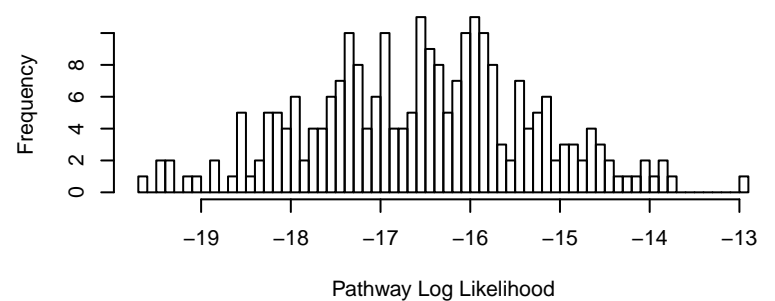
[196/3167] KDOSYN-PWY
Kdo transfer to lipid IV_A (*E. coli*)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[197/3167] KETOGLUCONMET-PWY
ketogluconate metabolism
(4 Reactions)



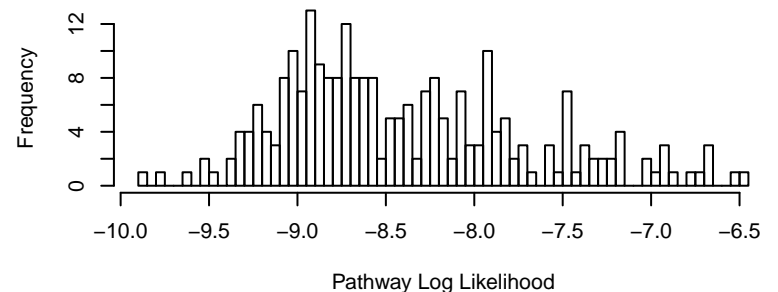
[198/3167] LACTOSECAT-PWY
lactose and galactose degradation I
(4 Reactions)

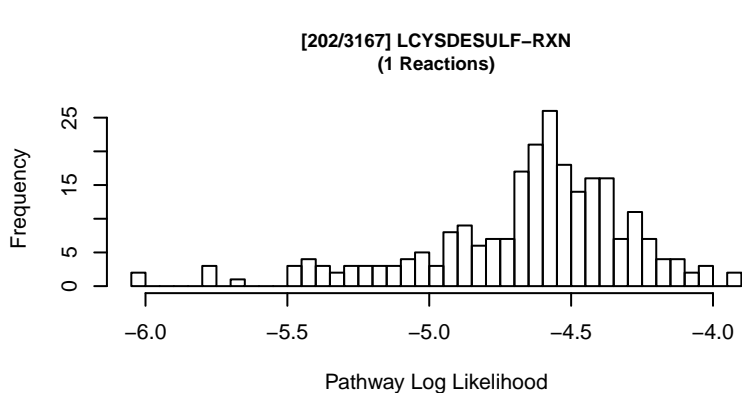
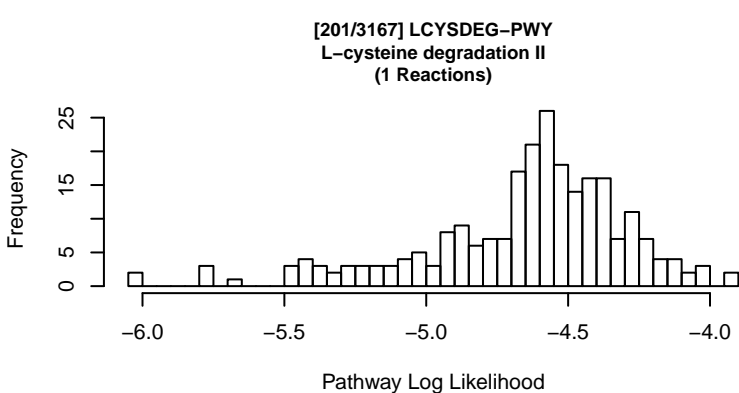


[199/3167] LACTOSEUTIL-PWY
lactose degradation II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[200/3167] LARABITOLUTIL-PWY
xylitol degradation
(2 Reactions)





[203/3167] LEU-DEG2-PWY
L-leucine degradation I
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[204/3167] LEUSYN-PWY
L-leucine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[205/3167] LIPA-CORESYN-PWY
lipid A-core biosynthesis (<i>E. coli</i> K-12)
(10 Reactions)

Missing 6 Reaction(s) from Pathway.

[206/3167] LIPAS-PWY
triacylglycerol degradation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[207/3167] LIPASYN-PWY
phospholipases
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[208/3167] LYSDEGII-PWY
L-lysine degradation III
(6 Reactions)

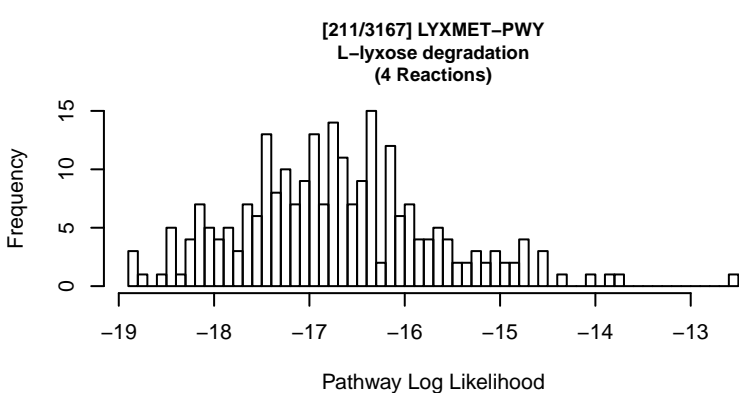
Missing 1 Reaction(s) from Pathway.

[209/3167] LYSINE-AMINOAD-PWY
L-lysine biosynthesis IV
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

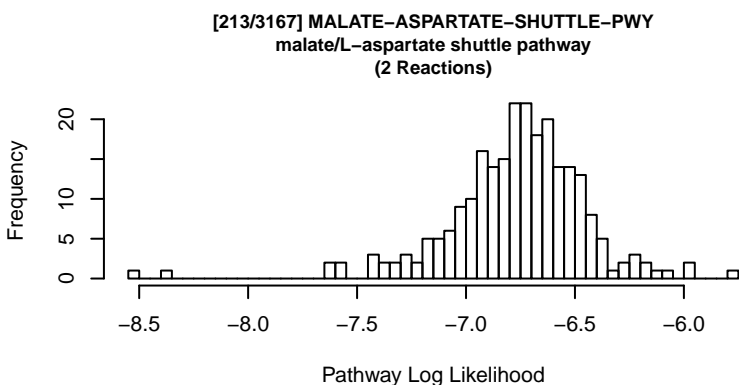
[210/3167] LYSINE-DEG1-PWY
L-lysine degradation XI (mammalian)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



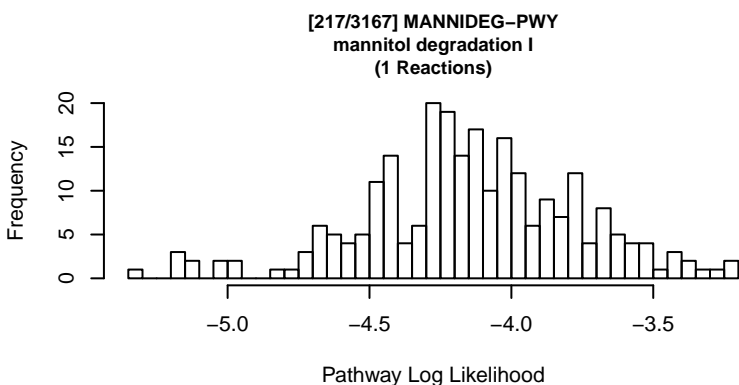
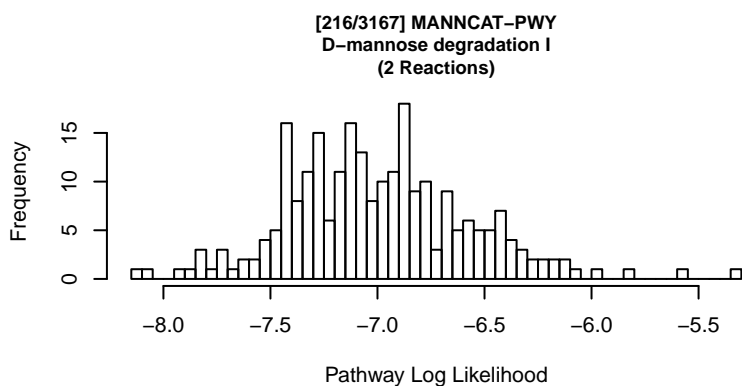
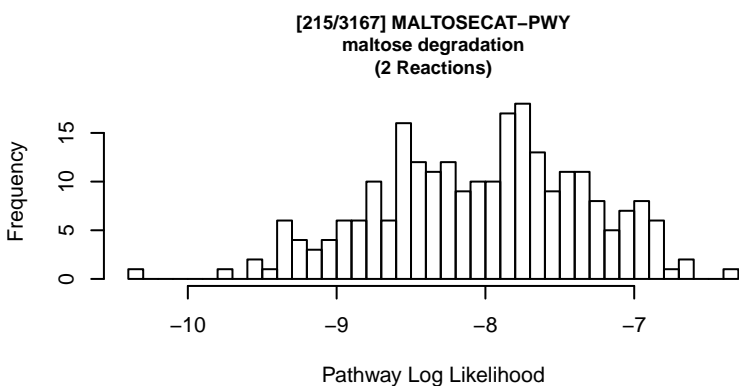
[212/3167] M-CRESOL-DEGRADATION-PWY
m-cresol degradation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.



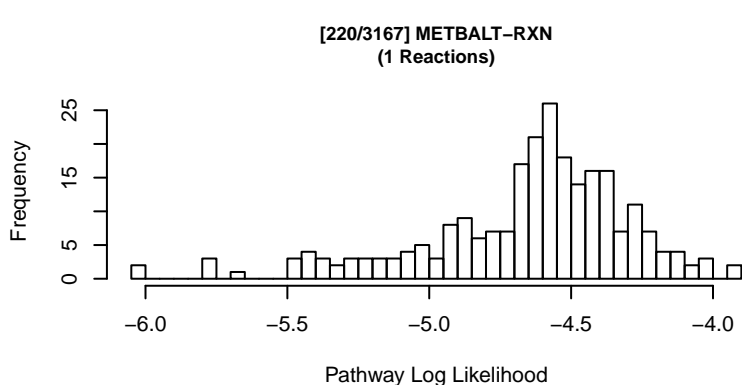
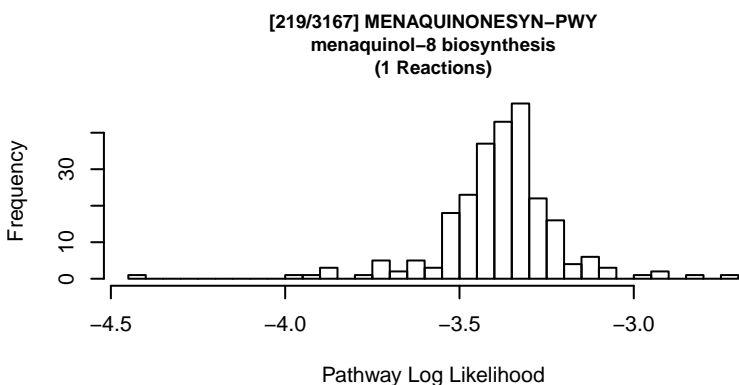
[214/3167] MALIC-NADP-RXN
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[218/3167] MANNOSYL-CHITO-DOLICHOL-BIOSYNTHESIS
protein N-glycosylation initial phase (eukaryotic)
(16 Reactions)

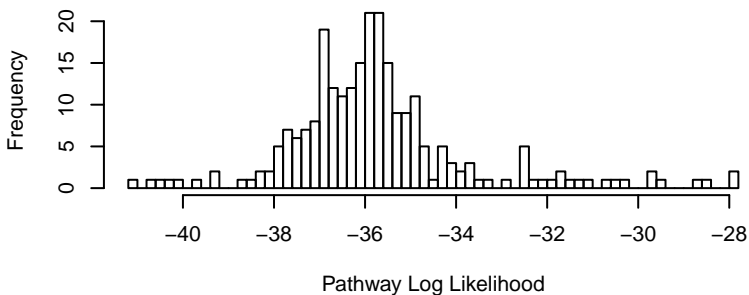
Missing 4 Reaction(s) from Pathway.



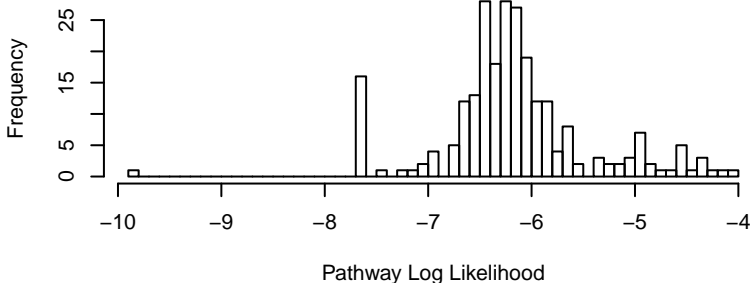
[221/3167] METH-ACETATE-PWY
methanogenesis from acetate
(7 Reactions)

Zeros/-Inf for reaction(s) in Pathway

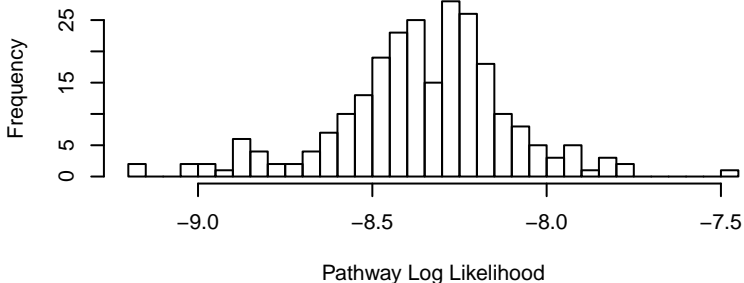
[222/3167] METHANOGENESIS-PWY
methanogenesis from H₂ and CO₂
(6 Reactions)



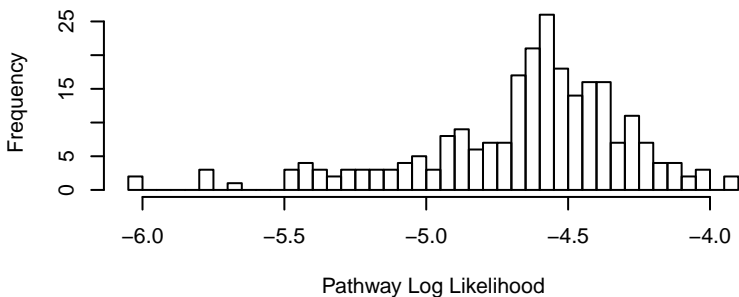
[223/3167] METHFORM-PWY
methyl-coenzyme M reduction to methane
(1 Reactions)



[224/3167] METHIONINE-DEG1-PWY
L-methionine degradation I (to L-homocysteine)
(3 Reactions)



[225/3167] METHIONINE-GAMMA-LYASE-RXN
(1 Reactions)



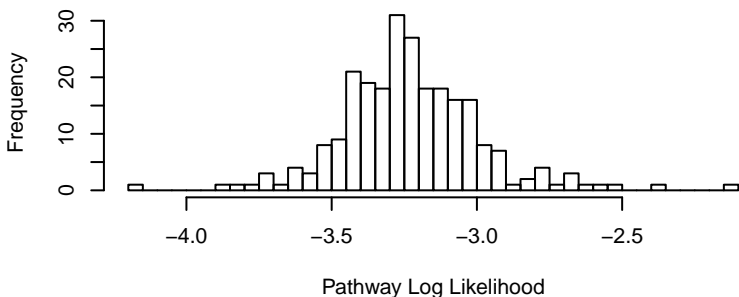
[226/3167] METHYLGALLATE-DEGRADATION-PWY
methylgallate degradation
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[227/3167] MGLDLCTANA-PWY
methylglyoxal degradation VI
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

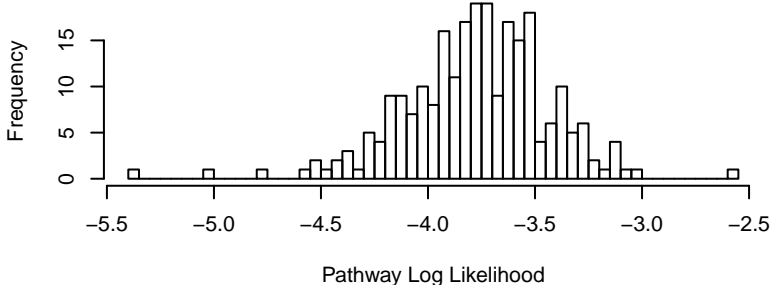
[228/3167] MONOPHENOL-MONOXYGENASE-RXN
(1 Reactions)



[229/3167] MTAMBARKMULTI-RXN
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

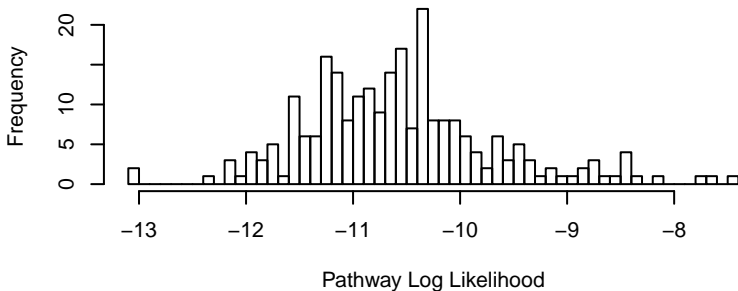
[230/3167] N2FIX-PWY
nitrogen fixation I (ferredoxin)
(1 Reactions)



[231/3167] NAD-BIOSYNTHESIS-II
NAD salvage pathway III (to nicotinamide riboside)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

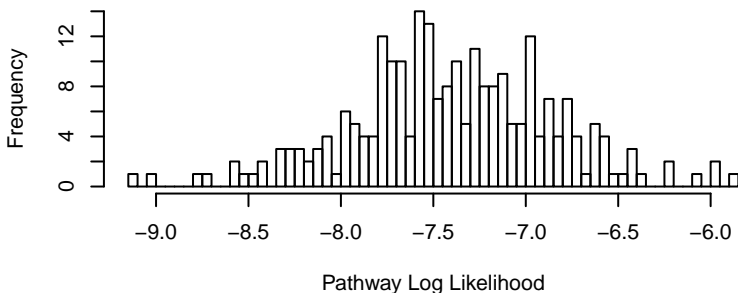
[232/3167] NAD-BIOSYNTHESIS-III
NAD biosynthesis III (from nicotinamide)
(2 Reactions)



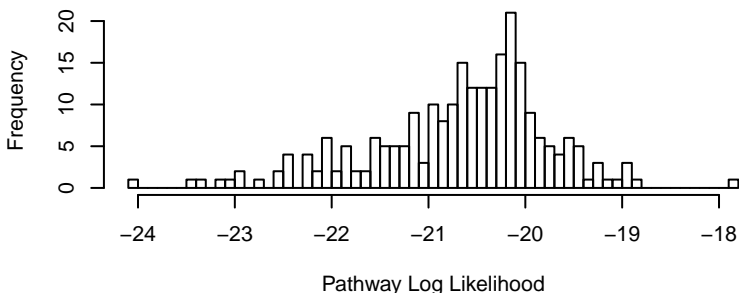
[233/3167] NADPHOS-DEPHOS-PWY
NAD phosphorylation and dephosphorylation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

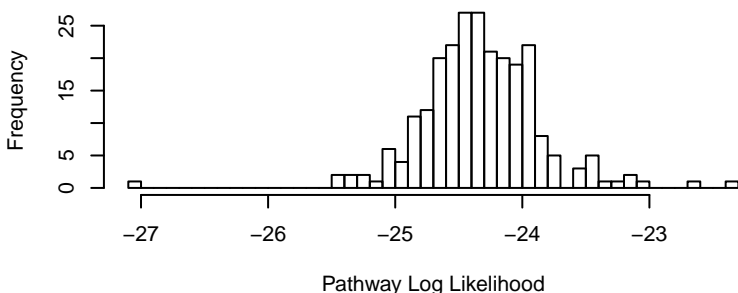
[234/3167] NADPHOS-DEPHOS-PWY-1
NAD phosphorylation and transhydrogenation
(2 Reactions)



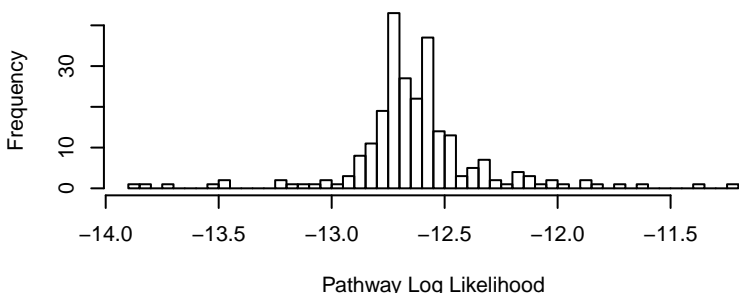
[235/3167] NAGLIPASYN-PWY
lipid IV_A biosynthesis (<i>E. coli</i>)
(6 Reactions)



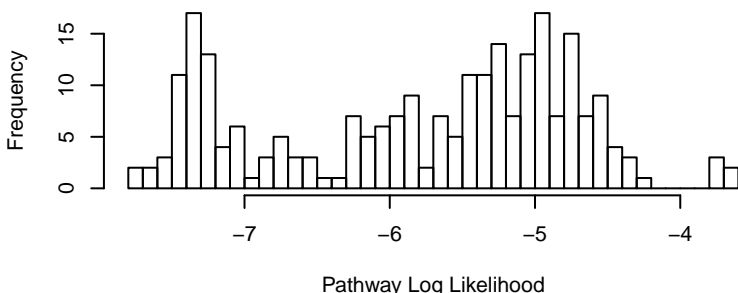
[236/3167] NONMEVIPP-PWY
methylerythritol phosphate pathway I
(8 Reactions)



[237/3167] NONOXIPENT-PWY
pentose phosphate pathway (non-oxidative branch) I
(4 Reactions)



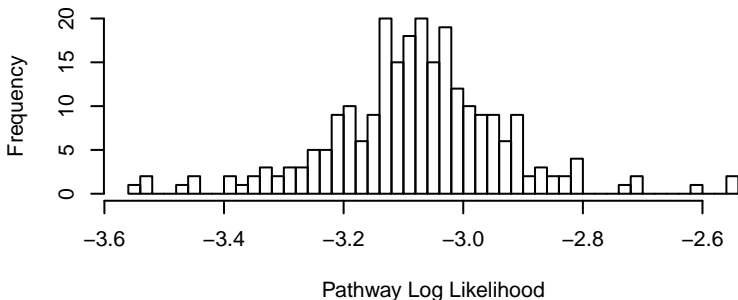
[238/3167] NOPALINEDEG-PWY
nopaline degradation
(1 Reactions)

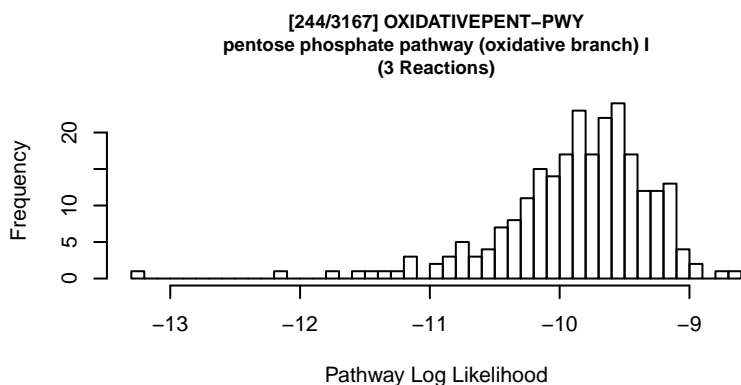
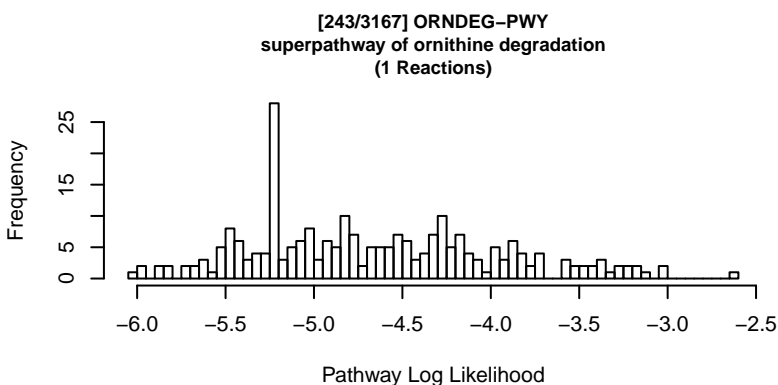
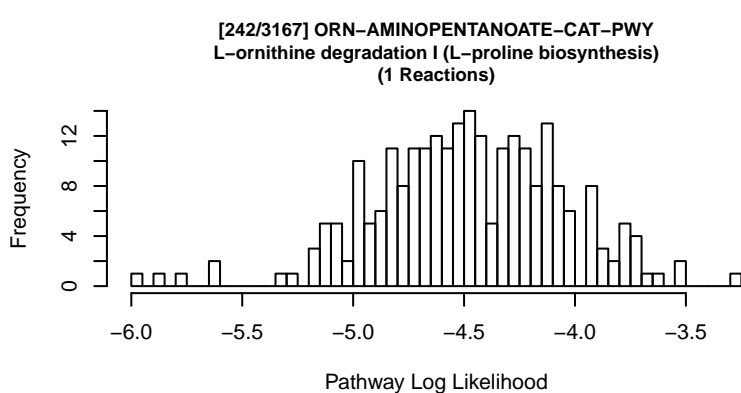
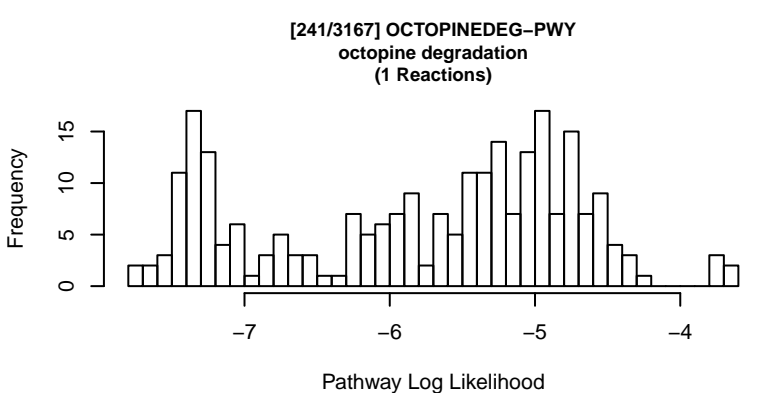


[239/3167] NPGLUCAT-PWY
Entner-Doudoroff pathway II (non-phosphorylative)
(11 Reactions)

Missing 2 Reaction(s) from Pathway.

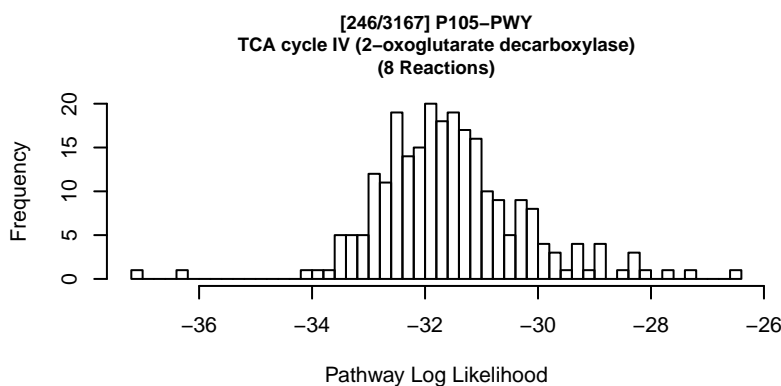
[240/3167] OANTIGEN-PWY
<i>O</i>-antigen building blocks biosynthesis (<i>E. coli</i>)
(1 Reactions)





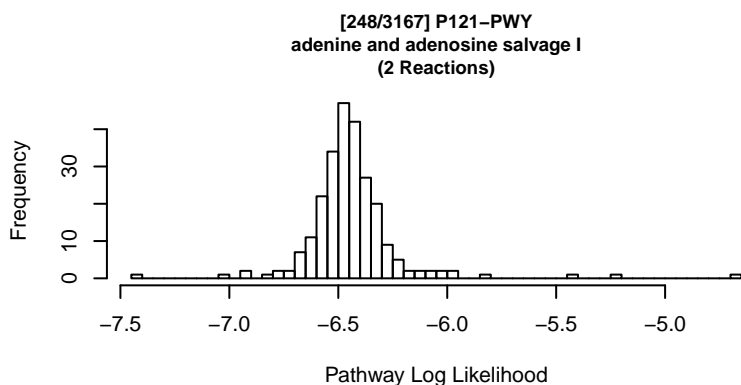
[245/3167] P101-PWY
ectoine biosynthesis
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway



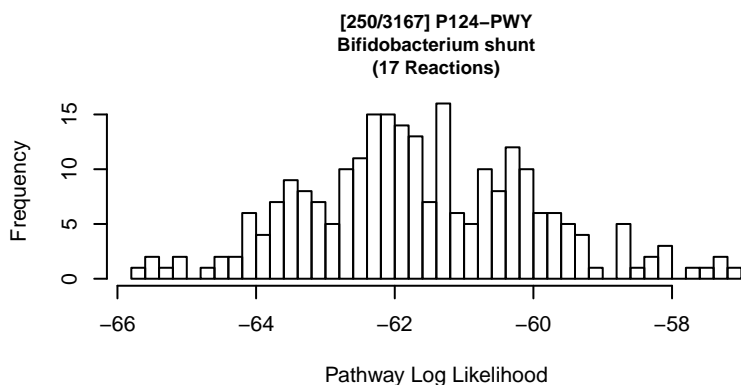
[247/3167] P108-PWY
pyruvate fermentation to propanoate I
(7 Reactions)

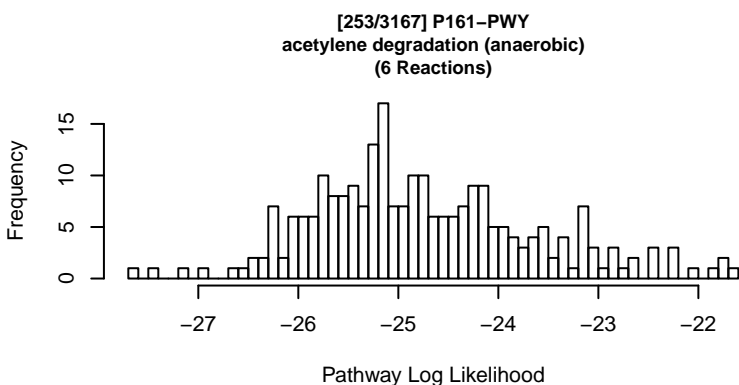
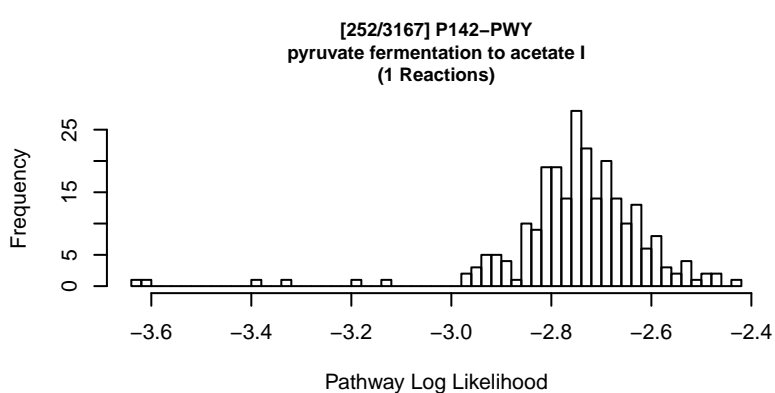
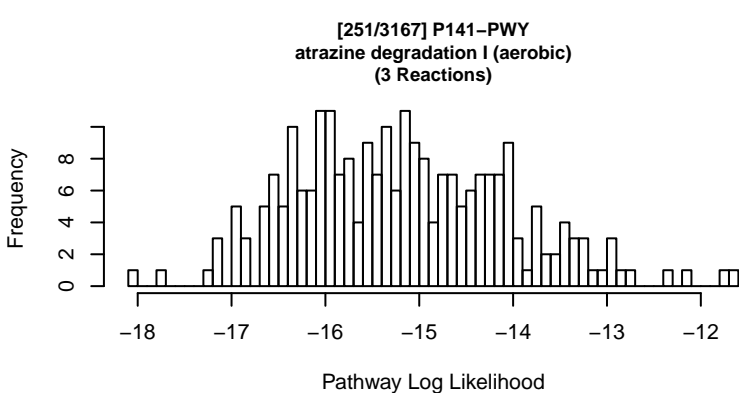
Missing 1 Reaction(s) from Pathway.



[249/3167] P122-PWY
heterolactic fermentation
(19 Reactions)

Missing 1 Reaction(s) from Pathway.





[254/3167] P162-PWY
L-glutamate degradation V (via hydroxyglutarate)
(12 Reactions)

Missing 1 Reaction(s) from Pathway.

[255/3167] P163-PWY
L-lysine fermentation to acetate and butanoate
(12 Reactions)

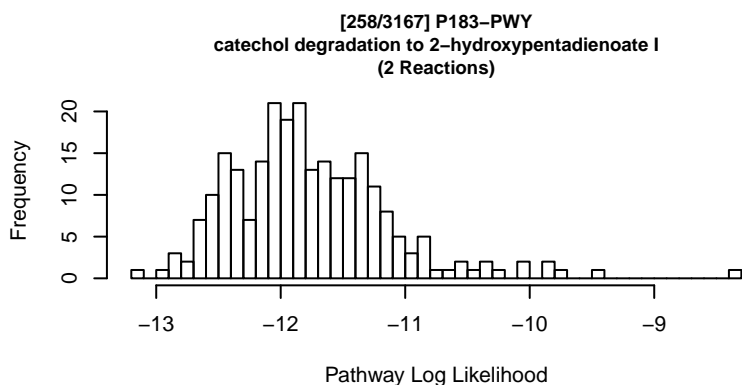
Missing 1 Reaction(s) from Pathway.

[256/3167] P164-PWY
purine nucleobases degradation I (anaerobic)
(13 Reactions)

Missing 3 Reaction(s) from Pathway.

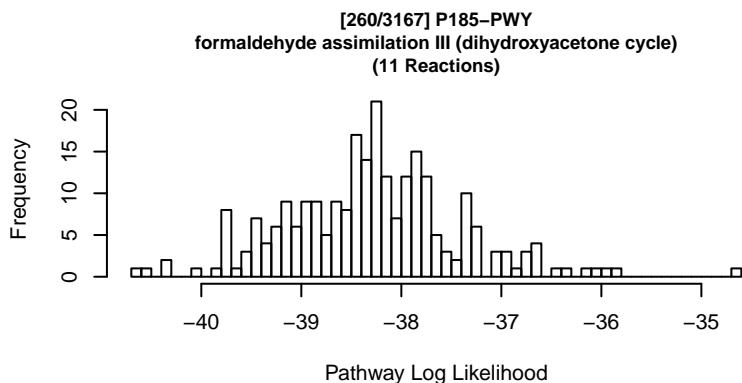
[257/3167] P181-PWY
nicotine degradation I (pyridine pathway)
(11 Reactions)

Missing 3 Reaction(s) from Pathway.



[259/3167] P184-PWY
protocatechuate degradation I (cleavage pathway)
(7 Reactions)

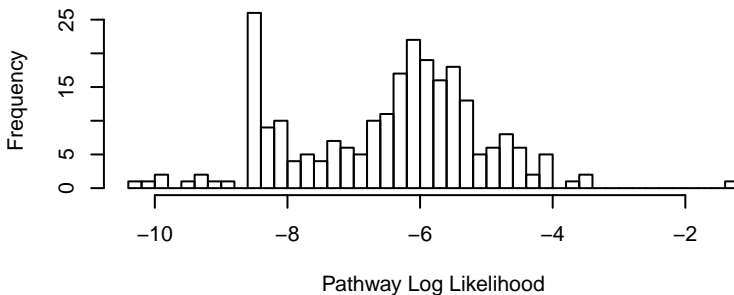
Missing 1 Reaction(s) from Pathway.



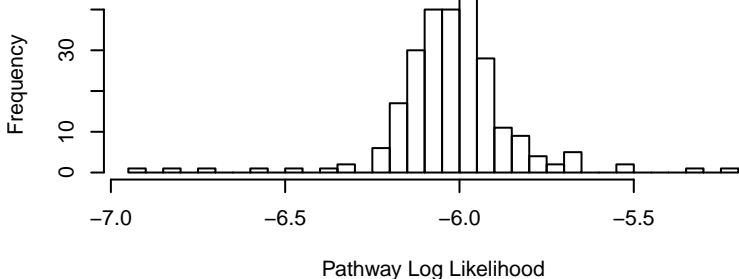
[261/3167] P2-PWY
citrate lyase activation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[262/3167] P201-PWY
nitroglycerin degradation
(1 Reactions)



[263/3167] P21-PWY
pentose phosphate pathway (partial)
(2 Reactions)



[264/3167] P221-PWY
octane oxidation
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[265/3167] P222-PWY
sulfide oxidation I (to sulfur globules)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[266/3167] P23-PWY
reductive TCA cycle I
(9 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[267/3167] P241-PWY
coenzyme B biosynthesis
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[268/3167] P261-PWY
coenzyme M biosynthesis I
(4 Reactions)

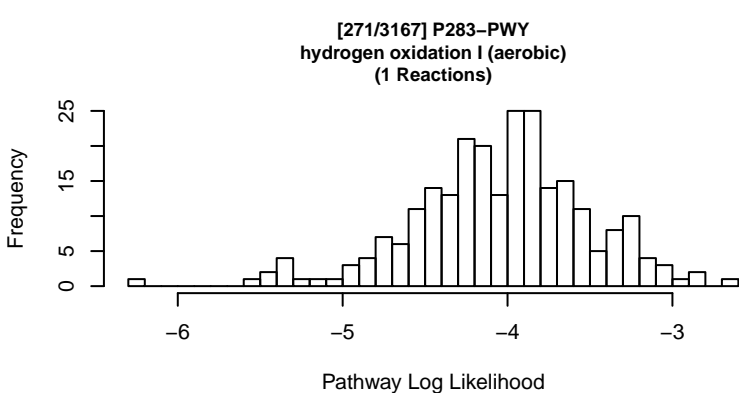
Missing 1 Reaction(s) from Pathway.

[269/3167] P281-PWY
3-phenylpropanoate degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

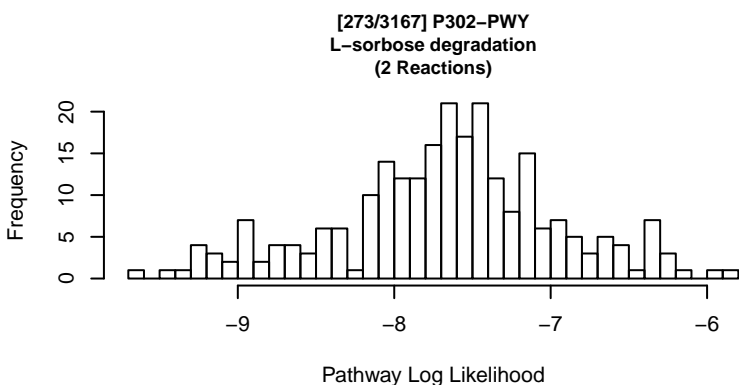
[270/3167] P282-PWY
nitrite oxidation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[272/3167] P3-PWY
gallate degradation III (anaerobic)
(12 Reactions)

Missing 2 Reaction(s) from Pathway.



[274/3167] P303-PWY
ammonia oxidation II (anaerobic)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[275/3167] P321-PWY
benzoyl-CoA degradation III (anaerobic)
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

[276/3167] P341-PWY
glycolysis V (Pyrococcus)
(10 Reactions)

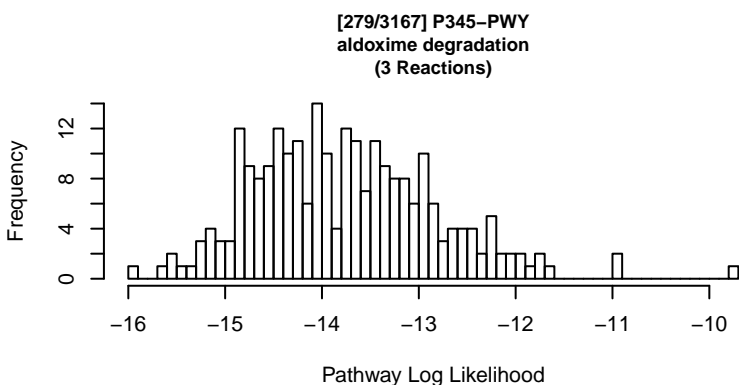
Missing 3 Reaction(s) from Pathway.

[277/3167] P342-PWY
orcinol degradation
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

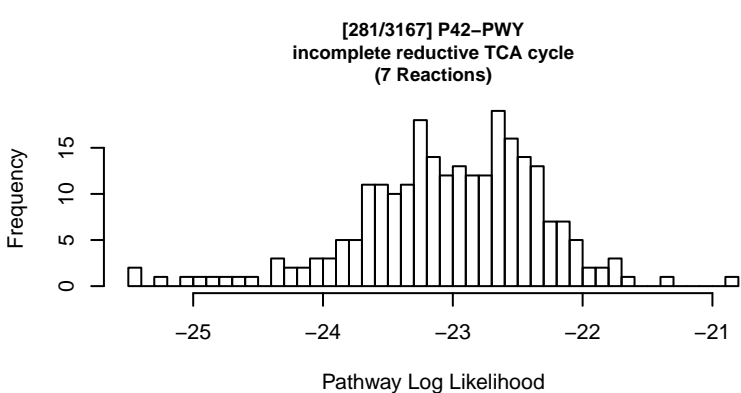
[278/3167] P343-PWY
resorcinol degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



[280/3167] P401-PWY
cyanide degradation
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[282/3167] P421-PWY
4-nitrotoluene degradation I
(3 Reactions)

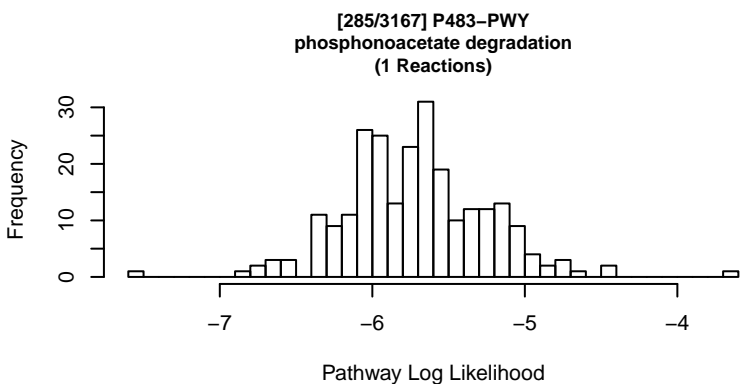
Missing 2 Reaction(s) from Pathway.

[283/3167] P481-PWY
adamantanone degradation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

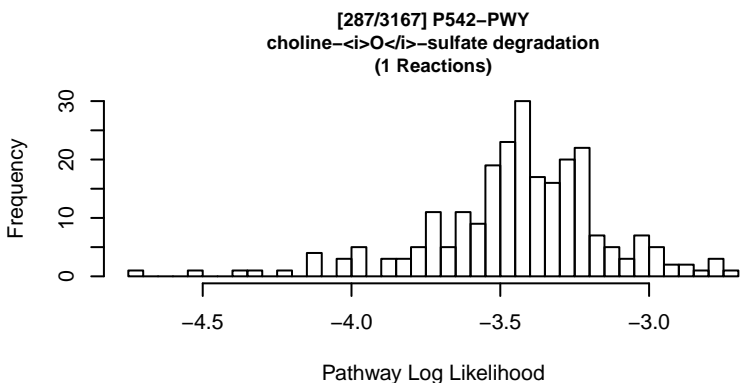
[284/3167] P482-PWY
arsonoacetate degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



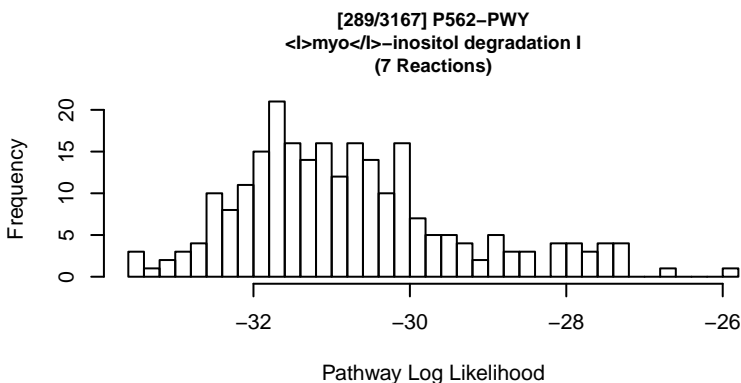
[286/3167] P541-PWY
glycine betaine biosynthesis IV (from glycine)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[288/3167] P561-PWY
proline betaine degradation I
(3 Reactions)

Missing 2 Reaction(s) from Pathway.



[290/3167] P581-PWY
thiocyanate degradation I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

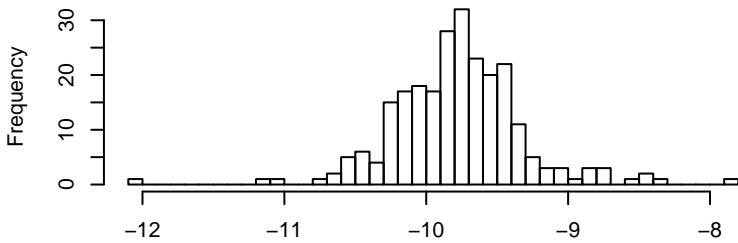
[291/3167] P601-PWY
(+)-camphor degradation
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[292/3167] P621-PWY
nylon-6 oligomer degradation
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[293/3167] P641-PWY
phenylmercury acetate degradation
(2 Reactions)



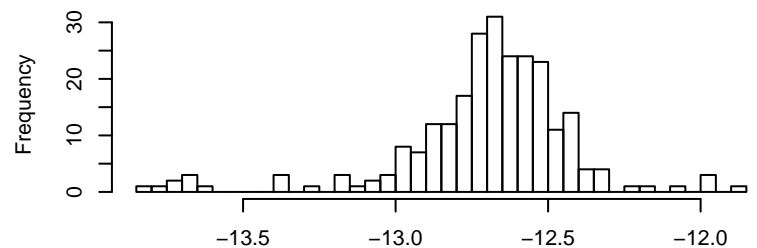
[294/3167] P661-PWY
dibenzo-*p*-dioxin degradation
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[295/3167] P662-PWY
dibenzofuran degradation
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[296/3167] PANTO-PWY
phosphopantothenate biosynthesis I
(4 Reactions)



[297/3167] PARATHION-DEGRADATION-PWY
parathion degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

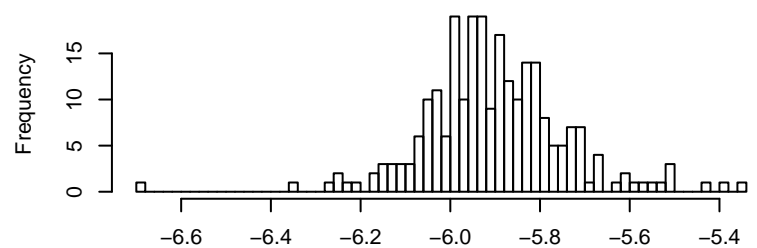
[298/3167] PCEDEG-PWY
tetrachloroethene degradation
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[299/3167] PCPDEG-PWY
pentachlorophenol degradation
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

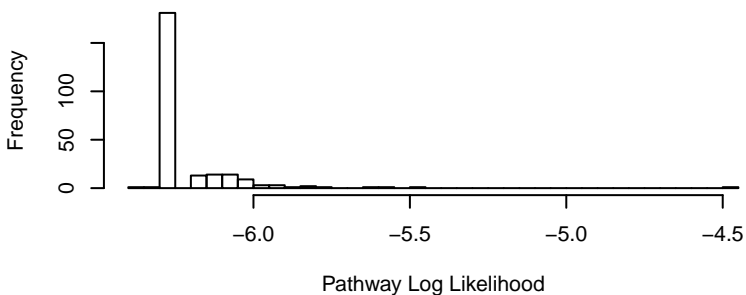
[300/3167] PEPTIDOGLYCANSYN-PWY
peptidoglycan monomer biosynthesis I (<i>meso(2 Reactions)



[301/3167] PHENOLDEG-PWY
phenol degradation II (anaerobic)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[302/3167] PHENYLALANINE-DEG1-PWY
L-phenylalanine degradation I (aerobic)
(1 Reactions)



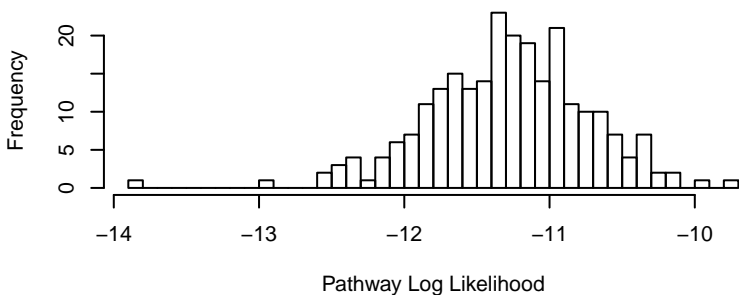
[303/3167] PHESYN
L-phenylalanine biosynthesis I
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

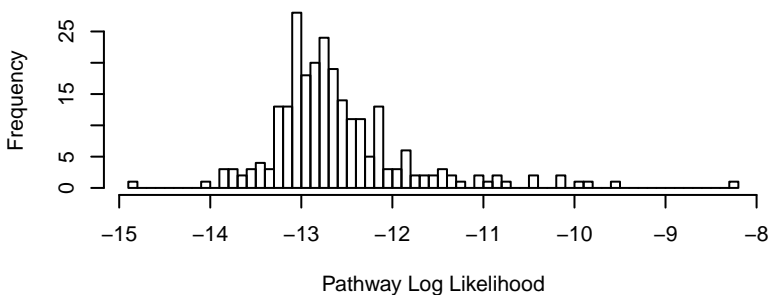
[304/3167] PHOSLIPSYN2-PWY
superpathway of phospholipid biosynthesis II (plants)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[305/3167] PHOSPHONOTASE-PWY
2-aminoethylphosphonate degradation I
(3 Reactions)



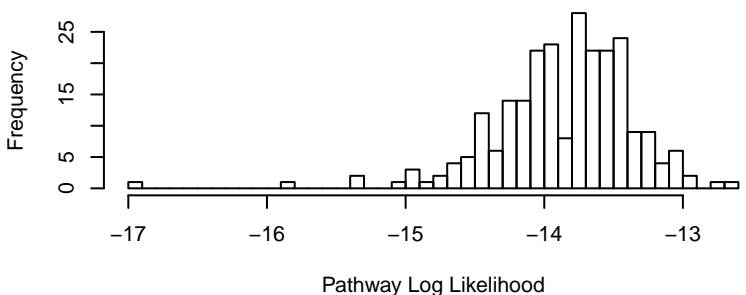
[306/3167] PLPSAL-PWY
pyridoxal 5'-phosphate salvage I
(3 Reactions)



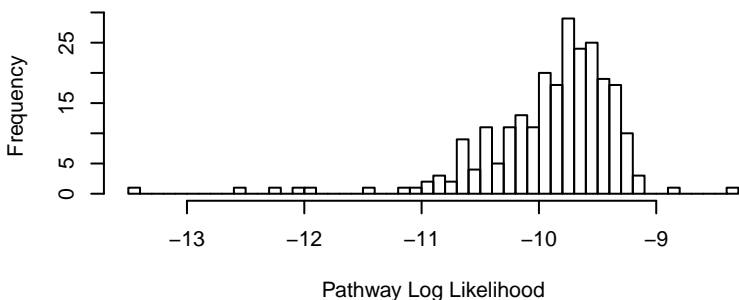
[307/3167] POLYAMINSYN3-PWY
superpathway of polyamine biosynthesis II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

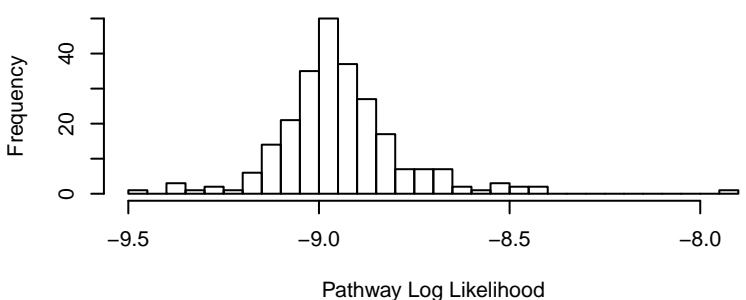
[308/3167] PPGPPMET-PWY
ppGpp metabolism
(4 Reactions)



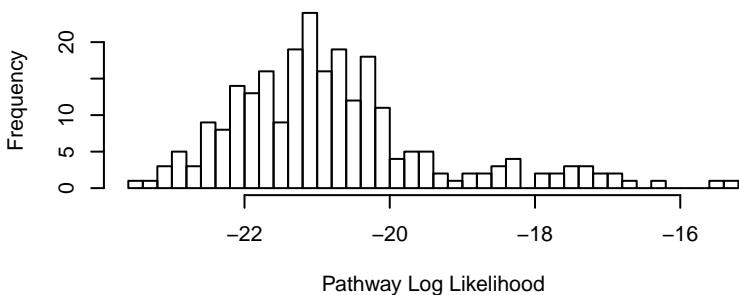
[309/3167] PROPIONMET-PWY
propanoyl CoA degradation I
(3 Reactions)



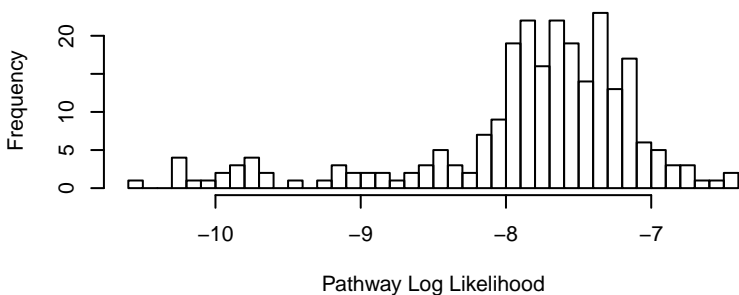
[310/3167] PROSYN-PWY
L-proline biosynthesis I (from L-glutamate)
(3 Reactions)



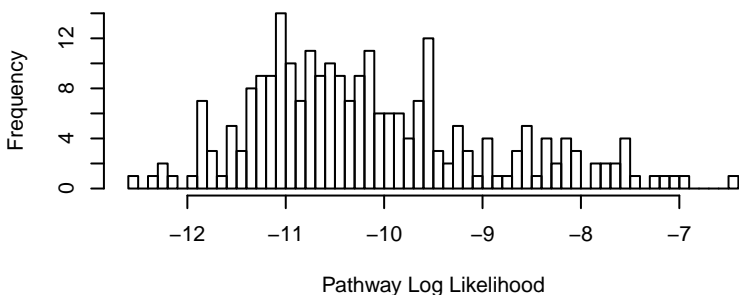
[311/3167] PROTOCATECHUATE-ORTHO-CLEAVAGE-PWY
protocatechuate degradation II (ortho-cleavage pathway)
(4 Reactions)



[312/3167] PROUT-PWY
L-proline degradation I
(2 Reactions)



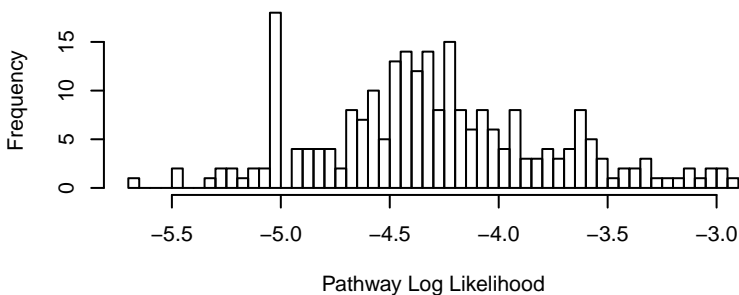
[313/3167] PUTDEG-PWY
putrescine degradation I
(2 Reactions)



[314/3167] PWY-0
putrescine degradation III
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[315/3167] PWY-1001
cellulose biosynthesis
(1 Reactions)



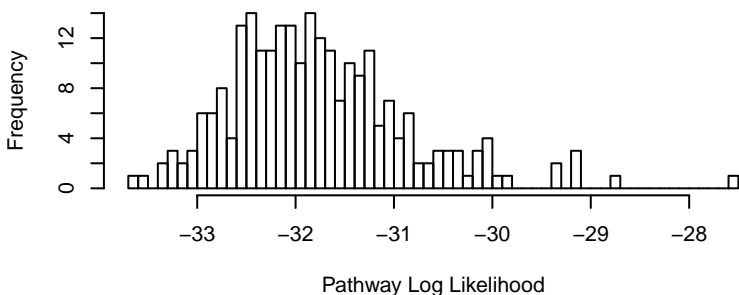
[316/3167] PWY-101
photosynthesis light reactions
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[317/3167] PWY-102
gibberellin inactivation I (2 β -hydroxylation)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[318/3167] PWY-1042
glycolysis IV
(10 Reactions)



[319/3167] PWY-1061
homogalacturonan biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[320/3167] PWY-112
lupeol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[321/3167] PWY-1121
suberin monomers biosynthesis
(16 Reactions)

Missing 7 Reaction(s) from Pathway.

[322/3167] PWY-116
coniferin metabolism
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[323/3167] PWY-1164
carbon disulfide oxidation I (anaerobic)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[324/3167] PWY-1186
L-homomethionine biosynthesis
(4 Reactions)

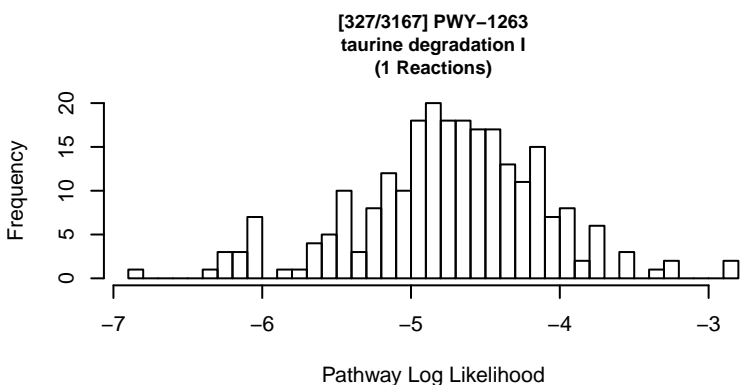
Missing 1 Reaction(s) from Pathway.

[325/3167] PWY-1187
glucosinolate biosynthesis from homomethionine
(10 Reactions)

Missing 8 Reaction(s) from Pathway.

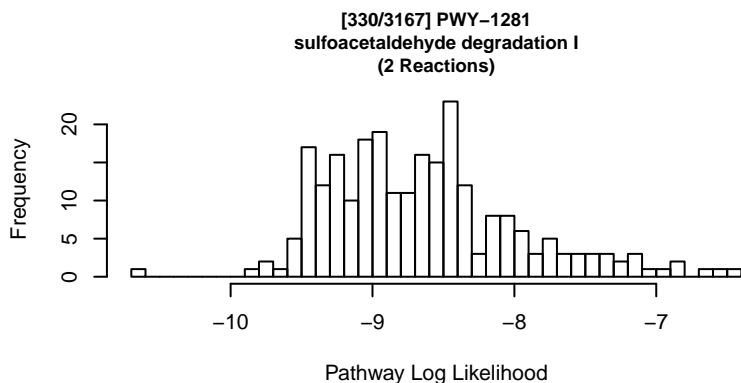
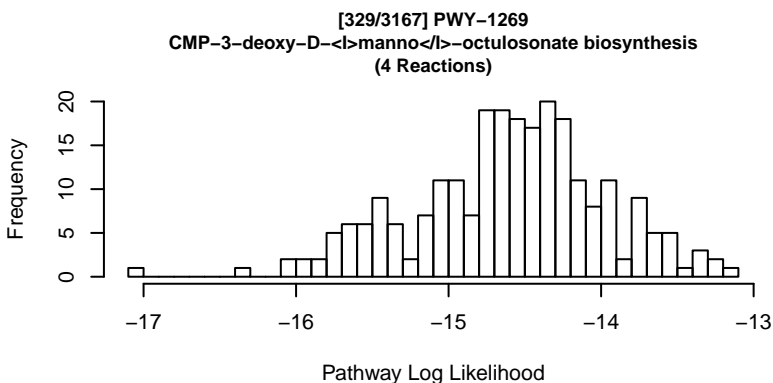
[326/3167] PWY-12
pentaketide chromone biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[328/3167] PWY-1264
taurine degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[331/3167] PWY-1341
phenylacetate degradation II (anaerobic)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[332/3167] PWY-1361
benzoyl-CoA degradation I (aerobic)
(7 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[333/3167] PWY-1381
fluorene degradation II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[334/3167] PWY-1422
vitamin E biosynthesis (tocopherols)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[335/3167] PWY-1501
mandelate degradation I
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

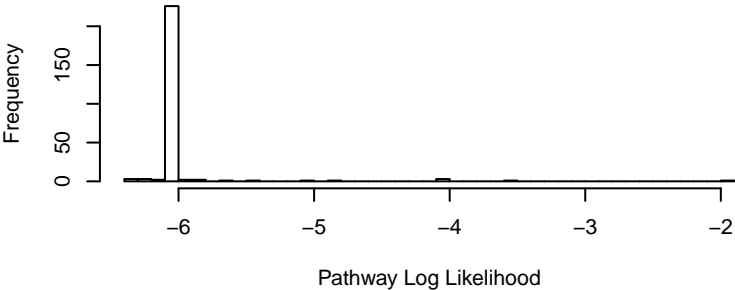
[336/3167] PWY-1581
plastoquinol-9 biosynthesis I
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

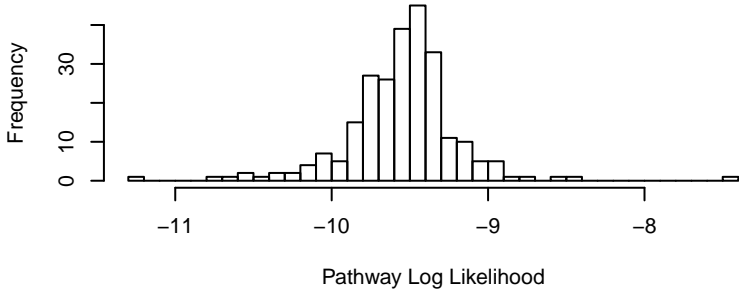
[337/3167] PWY-1622
formaldehyde assimilation I (serine pathway)
(10 Reactions)

Missing 1 Reaction(s) from Pathway.

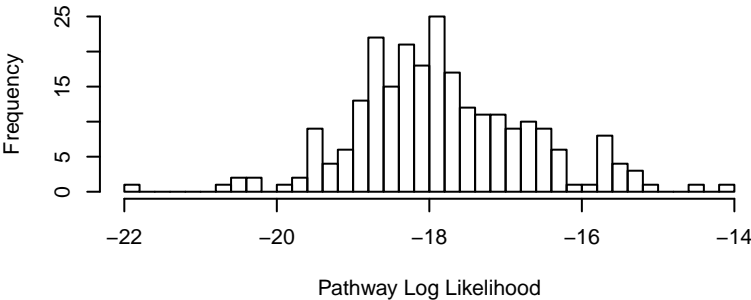
[338/3167] PWY-1641
methane oxidation to methanol I
(1 Reactions)



[339/3167] PWY-1722
formate assimilation into 5,10-methylenetetrahydrofolate
(3 Reactions)



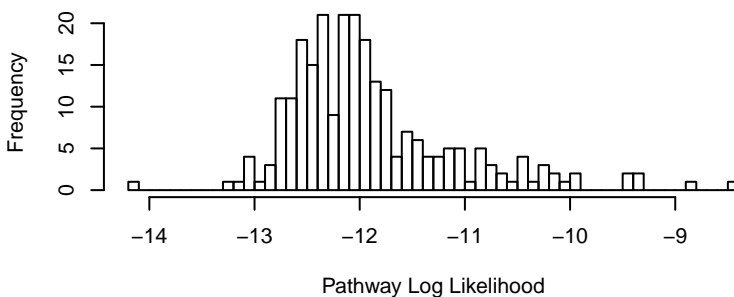
[340/3167] PWY-1723
formaldehyde oxidation VI (H₄MPT pathway)
(3 Reactions)



[341/3167] PWY-1741
indole-3-acetate inactivation IX
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[342/3167] PWY-1781
β-alanine degradation II
(2 Reactions)



[343/3167] PWY-1782
superpathway of indole-3-acetate conjugate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[344/3167] PWY-1801
formaldehyde oxidation II (glutathione-dependent)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

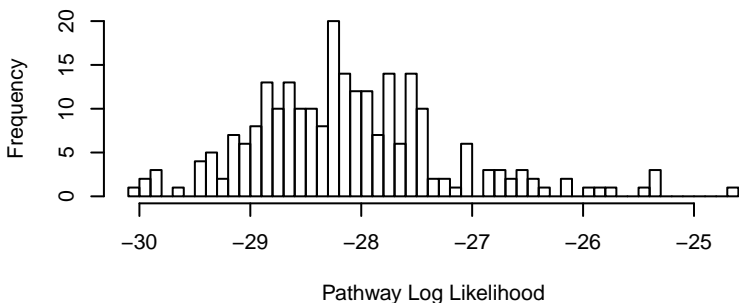
[345/3167] PWY-181
photorespiration
(9 Reactions)

Missing 2 Reaction(s) from Pathway.

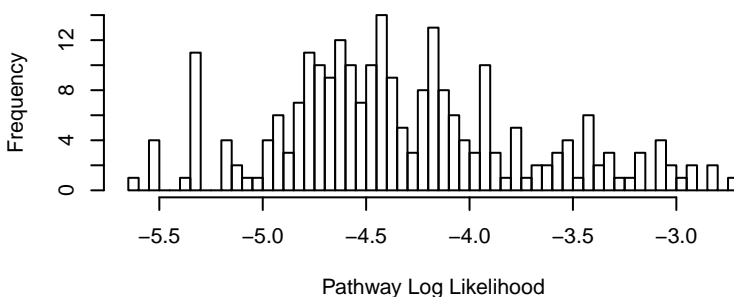
[346/3167] PWY-1822
indole-3-acetate activation I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[347/3167] PWY-1861
formaldehyde assimilation II (assimilatory RuMP Cycle)
(8 Reactions)



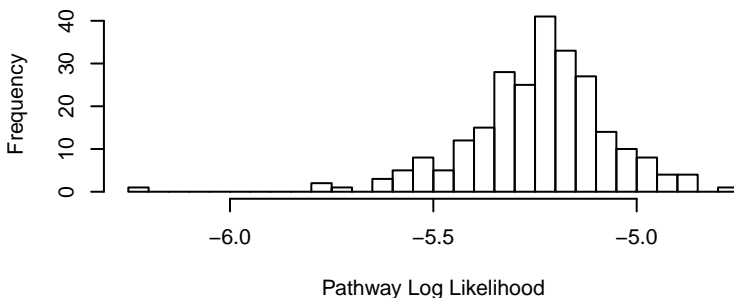
[348/3167] PWY-1881
formate oxidation to CO₂
(1 Reactions)

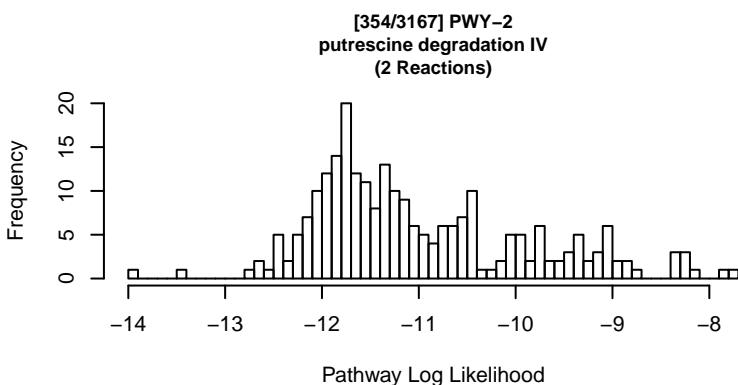
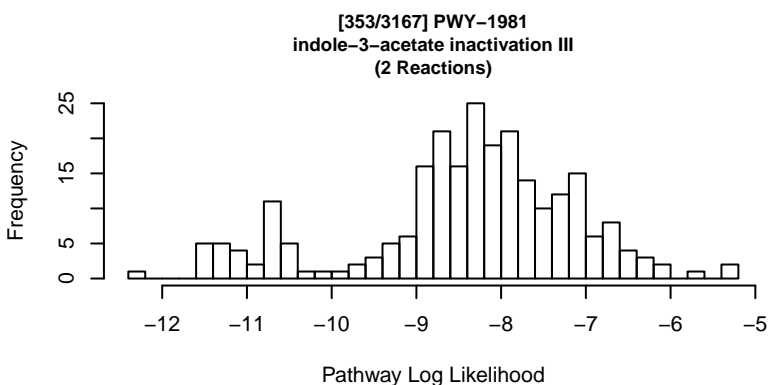
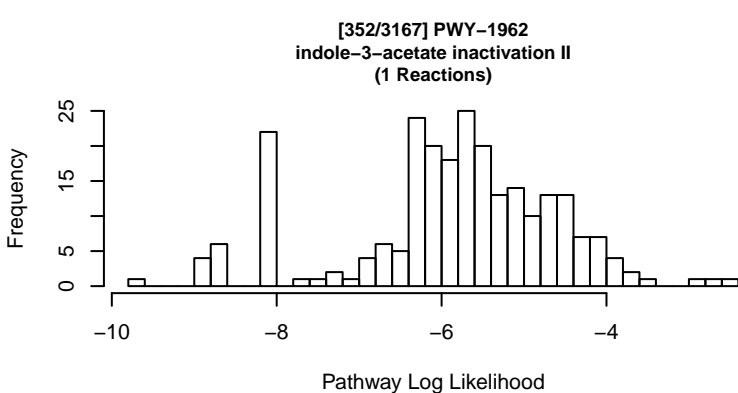
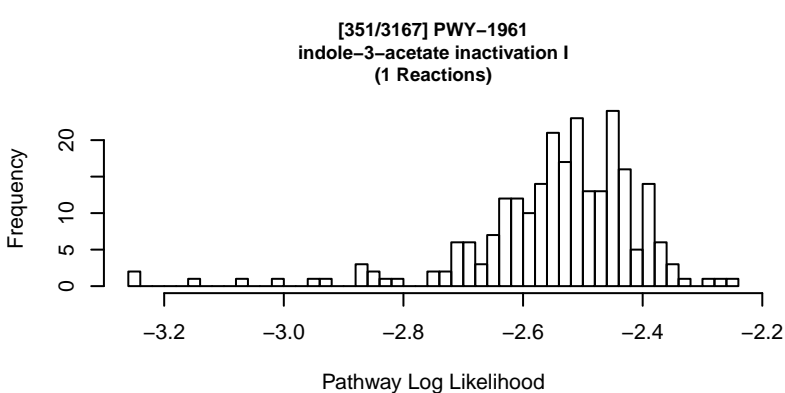


[349/3167] PWY-1901
aurone biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

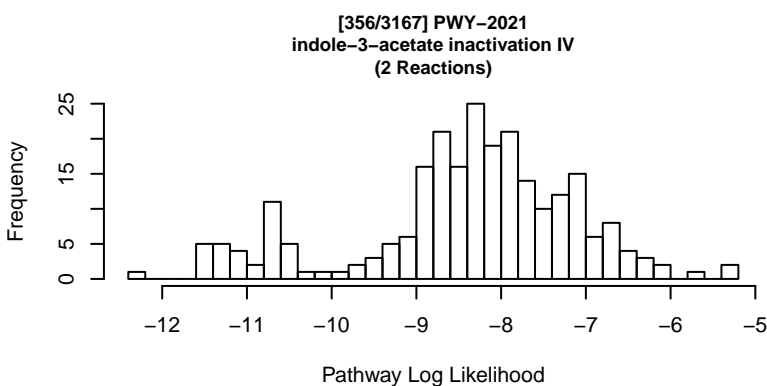
[350/3167] PWY-1921
indole-3-acetate activation II
(2 Reactions)





[355/3167] PWY-2002
isoflavonoid biosynthesis I
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

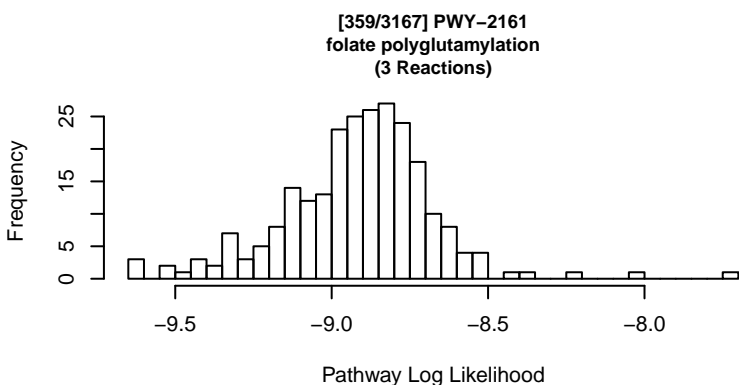


[357/3167] PWY-2055
superpathway of pterocarpan biosynthesis (via daidzein)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[358/3167] PWY-2083
isoflavonoid biosynthesis II
(8 Reactions)

Missing 7 Reaction(s) from Pathway.



[360/3167] PWY-2161B
glutamate removal from folates
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[361/3167] PWY-2181
free phenylpropanoid acid biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[362/3167] PWY-2201
folate transformations I
(13 Reactions)

Missing 5 Reaction(s) from Pathway.

[363/3167] PWY-2221
Entner-Doudoroff pathway III (semi-phosphorylative)
(13 Reactions)

Missing 5 Reaction(s) from Pathway.

[364/3167] PWY-2229
superpathway of pterocarpan biosynthesis (via formononetin)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

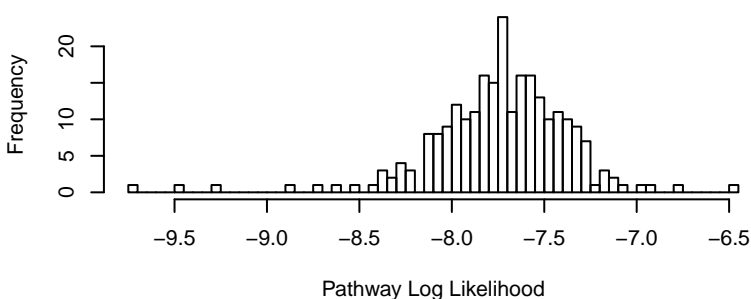
[365/3167] PWY-2242
ammonia oxidation III
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[366/3167] PWY-2261
ascorbate glutathione cycle
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[367/3167] PWY-2301
***myo*-inositol biosynthesis**
(2 Reactions)



[368/3167] PWY-2321
formononetin biosynthesis
(3 Reactions)

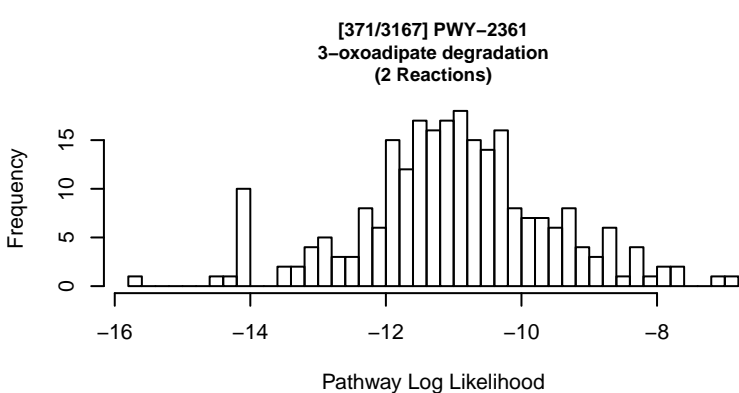
Missing ALL Reaction(s) from Pathway.

[369/3167] PWY-2343
daidzein conjugates interconversion
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[370/3167] PWY-2345
genistein conjugates interconversion
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[372/3167] PWY-2381
4-nitrobenzoate degradation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[373/3167] PWY-241
C4 photosynthetic carbon assimilation cycle, NADP-ME type
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[374/3167] PWY-2421
indole-3-acetate degradation I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[375/3167] PWY-2463
(-)-medicarpin biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[376/3167] PWY-2464
(-)-maackiain biosynthesis
(6 Reactions)

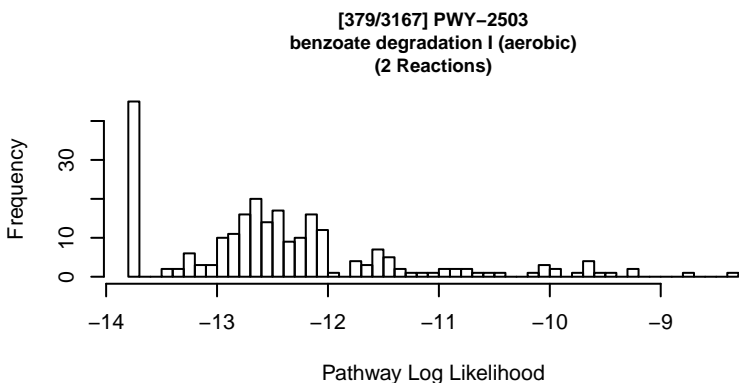
Missing ALL Reaction(s) from Pathway.

[377/3167] PWY-2467
(+)-pisatin biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[378/3167] PWY-2501
fatty acid α-oxidation I (plants)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[380/3167] PWY-2541
phytosterol biosynthesis (plants)
(17 Reactions)

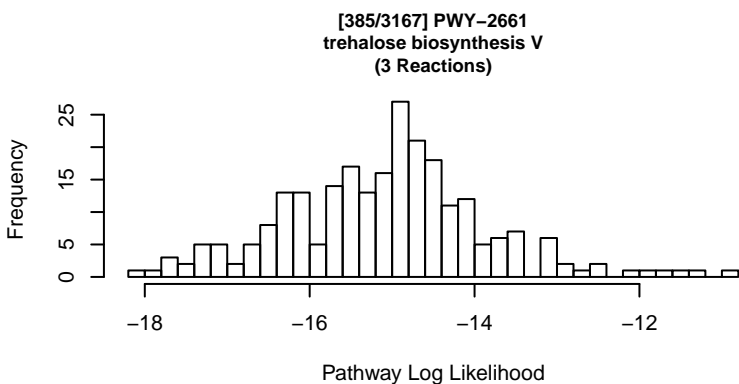
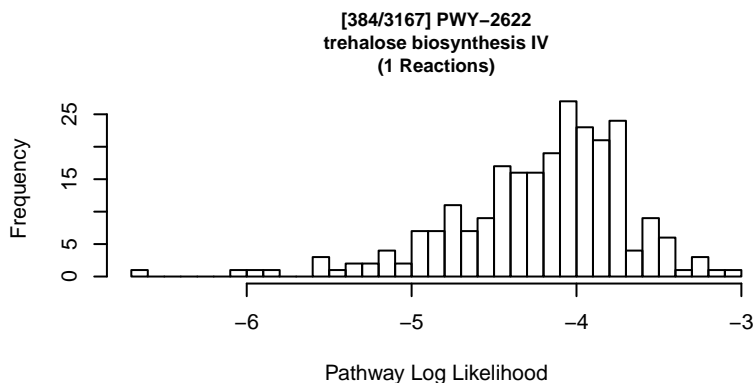
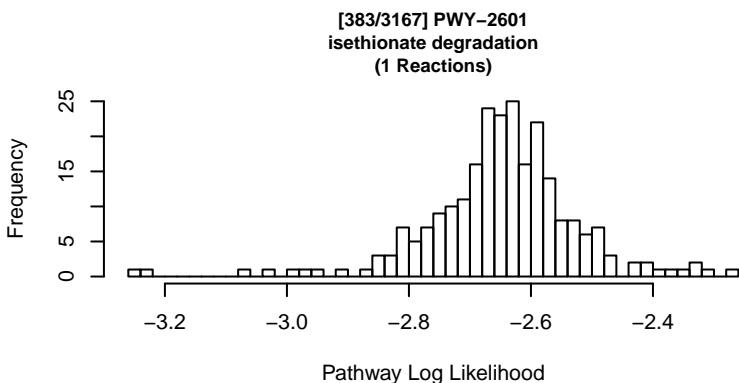
Missing 14 Reaction(s) from Pathway.

[381/3167] PWY-2561
medicarpin conjugates interconversion
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[382/3167] PWY-2582
brassinosteroid biosynthesis II
(9 Reactions)

Missing 5 Reaction(s) from Pathway.

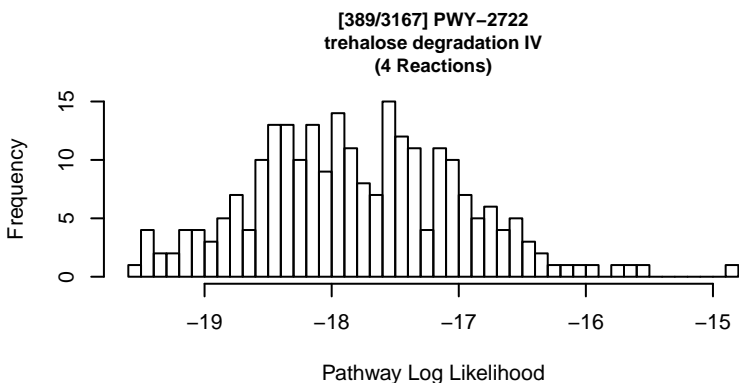
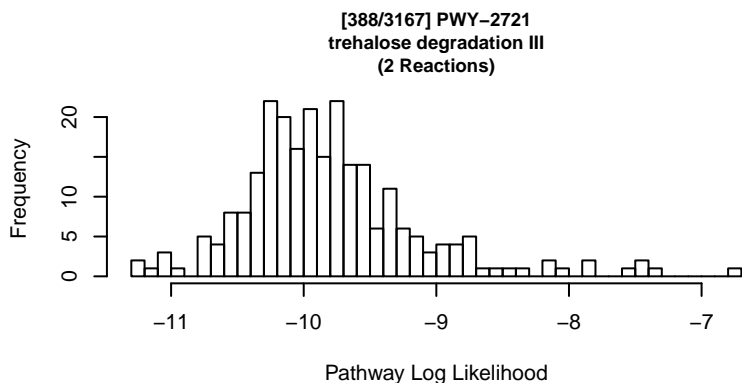


[386/3167] PWY-2681
<i>trans</i>-zeatin biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[387/3167] PWY-2701
maackiain conjugates interconversion
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[390/3167] PWY-2723
trehalose degradation V
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[391/3167] PWY-2724
alkane oxidation
(6 Reactions)

Zeros/-Inf for reaction(s) in Pathway.

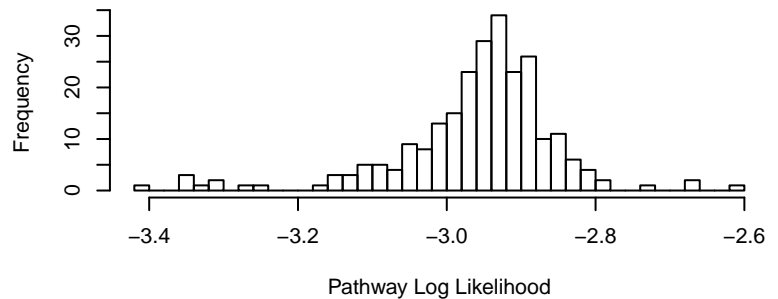
[392/3167] PWY-2761
(-)-glycinol biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

[393/3167] PWY-2762
glyceollin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[394/3167] PWY-2781
<i>cis</i>-zeatin biosynthesis
(1 Reactions)



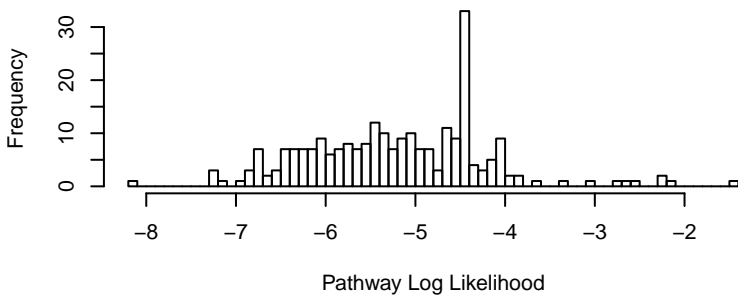
[395/3167] PWY-282
cuticular wax biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[396/3167] PWY-2821
glucosinolate biosynthesis from phenylalanine
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[397/3167] PWY-283
benzoate degradation II (aerobic and anaerobic)
(1 Reactions)



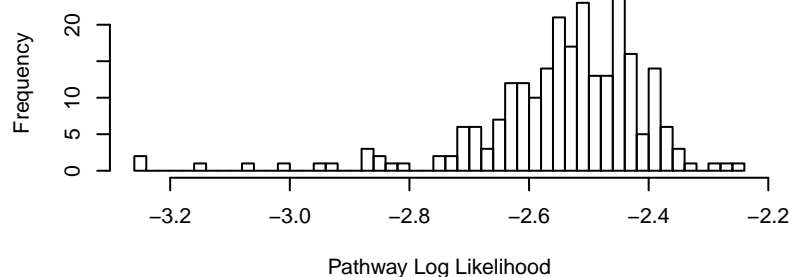
[398/3167] PWY-2841
cytokinins degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

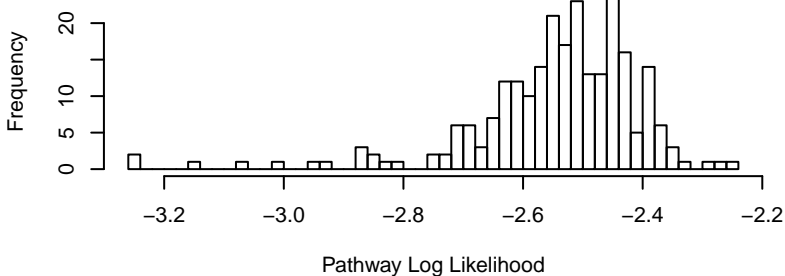
[399/3167] PWY-2861
biochanin A conjugates interconversion
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[400/3167] PWY-2881
cytokinins 7-*N*-glucoside biosynthesis
(1 Reactions)



[401/3167] PWY-2901
cytokinins 9-*N*-glucoside biosynthesis
(1 Reactions)



[402/3167] PWY-2902
cytokinin-*O*-glucosides biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

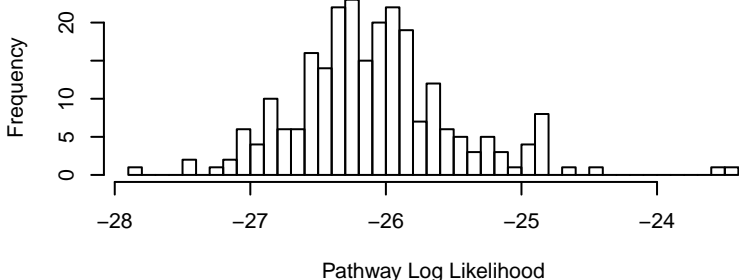
[403/3167] PWY-2904
formononetin conjugates interconversion
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

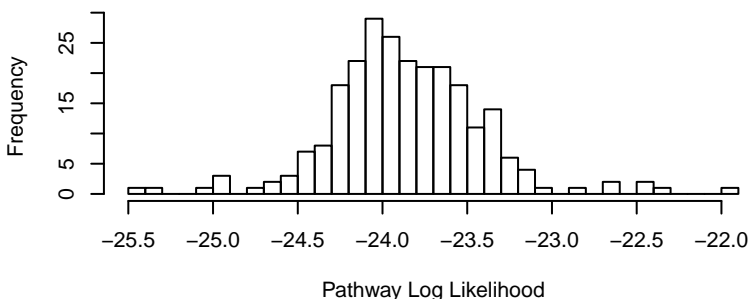
[404/3167] PWY-2921
capsidiol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[405/3167] PWY-2941
L-lysine biosynthesis II
(8 Reactions)



[406/3167] PWY-2942
L-lysine biosynthesis III
(7 Reactions)



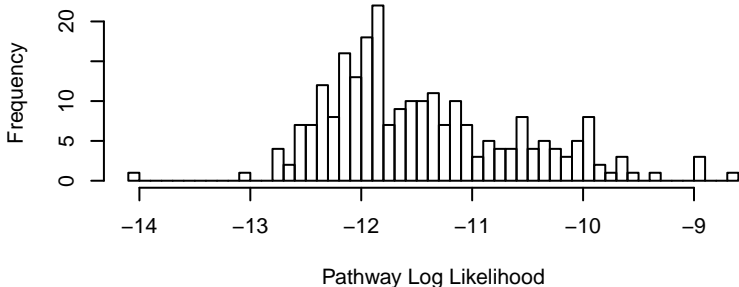
[407/3167] PWY-2961
sesquiterpenoid phytoalexins biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[408/3167] PWY-2981
diterpene phytoalexins precursors biosynthesis
(9 Reactions)

Missing ALL Reaction(s) from Pathway.

[409/3167] PWY-3
putrescine degradation V
(2 Reactions)



[410/3167] PWY-301
cyclohexane-1-carboxylate degradation (anaerobic)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[411/3167] PWY-3022
linamarin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[412/3167] PWY-3041
monoterpene biosynthesis
(9 Reactions)

Missing 8 Reaction(s) from Pathway.

[413/3167] PWY-3061
menthol biosynthesis
(9 Reactions)

Missing 8 Reaction(s) from Pathway.

[414/3167] PWY-3081
L-lysine biosynthesis V
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

[415/3167] PWY-31
canavanine degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[416/3167] PWY-3101
flavonol biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[417/3167] PWY-3121
linamarin degradation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[418/3167] PWY-3161
indole-3-acetate biosynthesis III (bacteria)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[419/3167] PWY-3162
L-tryptophan degradation V (side chain pathway)
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

[420/3167] PWY-3181
L-tryptophan degradation VI (via tryptamine)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[421/3167] PWY-321
cutin biosynthesis
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

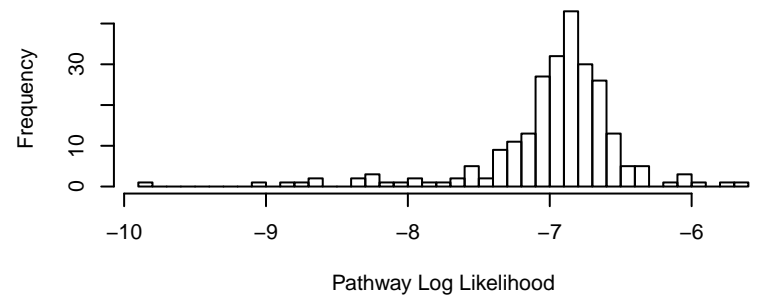
[422/3167] PWY-3261
UDP-β-L-rhamnose biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[423/3167] PWY-3301
sinapate ester biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

[424/3167] PWY-3341
L-proline biosynthesis III (from L-ornithine)
(2 Reactions)



[425/3167] PWY-3385
choline biosynthesis I
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

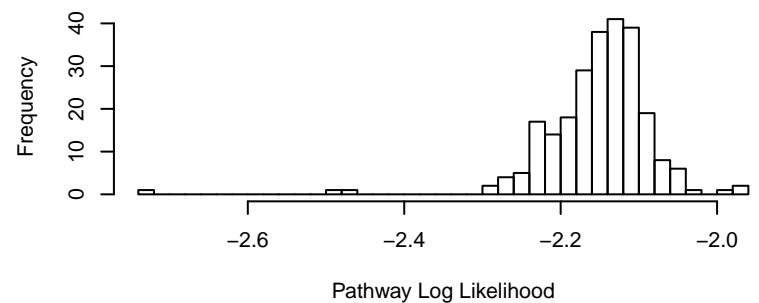
[426/3167] PWY-3461
L-tyrosine biosynthesis II
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[427/3167] PWY-3462
L-phenylalanine biosynthesis II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[428/3167] PWY-3542
choline biosynthesis II
(1 Reactions)



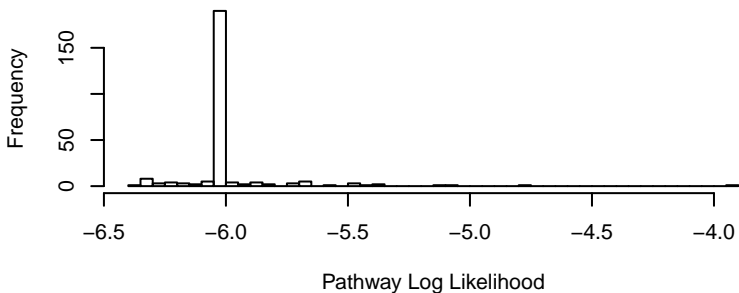
[429/3167] PWY-3561
choline biosynthesis III
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[430/3167] PWY-3581
(*S*)-reticuline biosynthesis I
(13 Reactions)

Missing 8 Reaction(s) from Pathway.

[431/3167] PWY-3602
L-carnitine degradation I
(1 Reactions)



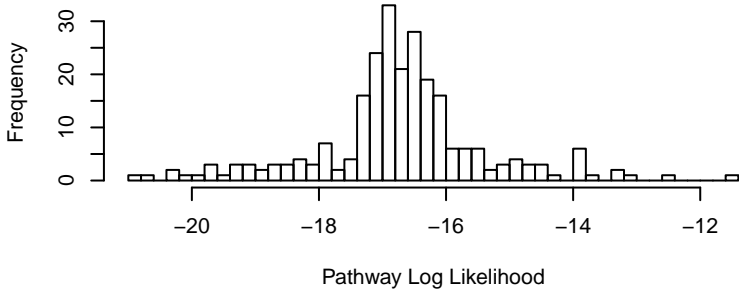
[432/3167] PWY-361
phenylpropanoid biosynthesis
(10 Reactions)

Missing 4 Reaction(s) from Pathway.

[433/3167] PWY-3621
γ-butyrobetaine degradation
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[434/3167] PWY-3641
L-carnitine degradation II
(3 Reactions)



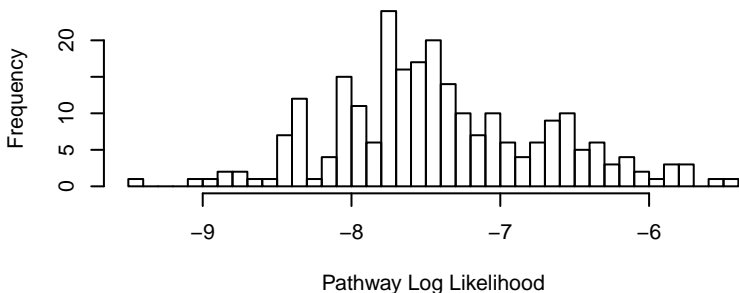
[435/3167] PWY-3661
glycine betaine degradation I
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

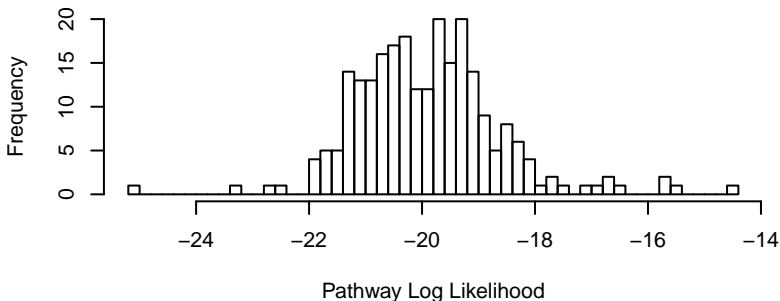
[436/3167] PWY-3661-1
glycine betaine degradation II (mammalian)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[437/3167] PWY-3722
glycine betaine biosynthesis II (Gram-positive bacteria)
(2 Reactions)



[438/3167] PWY-3781
aerobic respiration I (cytochrome c)
(4 Reactions)



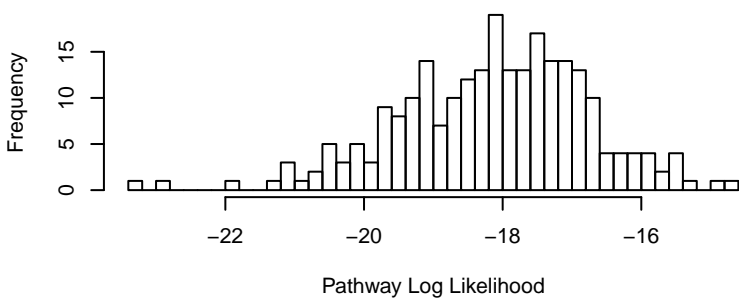
[439/3167] PWY-3801
sucrose degradation II (sucrose synthase)
(6 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[440/3167] PWY-381
nitrate reduction II (assimilatory)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

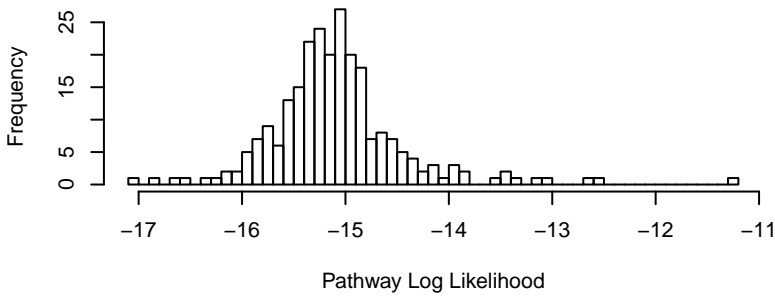
[441/3167] PWY-3821
D-galactose detoxification
(4 Reactions)



[442/3167] PWY-3841
folate transformations II (plants)
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

[443/3167] PWY-3861
mannitol degradation II
(3 Reactions)



[444/3167] PWY-3881
mannitol biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[445/3167] PWY-3901
berberine biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[446/3167] PWY-3941
β-alanine biosynthesis II
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

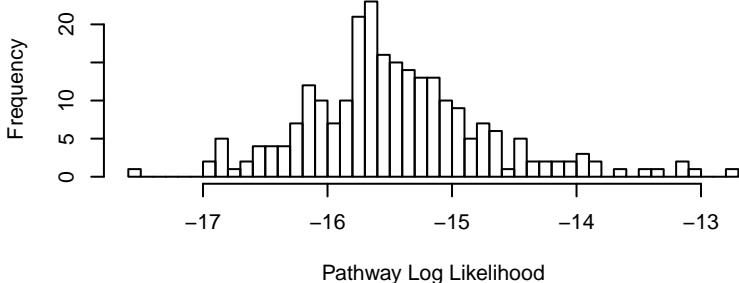
[447/3167] PWY-3961
phosphopantothenate biosynthesis II
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[448/3167] PWY-3981
β-alanine biosynthesis I
(2 Reactions)

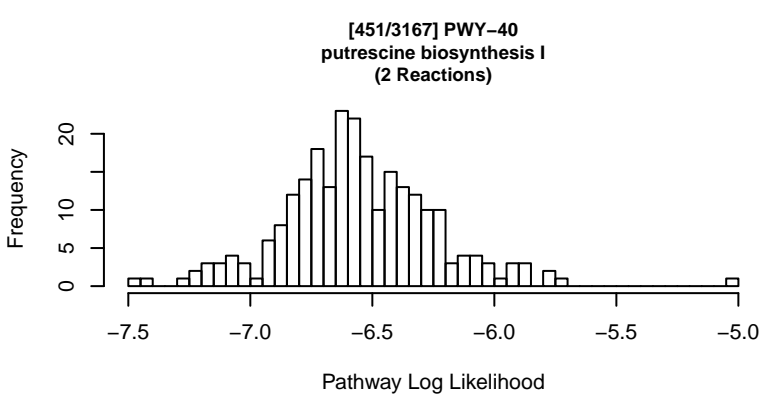
Missing 1 Reaction(s) from Pathway.

[449/3167] PWY-3982
uracil degradation I (reductive)
(3 Reactions)



[450/3167] PWY-4
UDP-α-D-galacturonate biosynthesis II (from D-galacturonate)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[452/3167] PWY-4002
L-asparagine degradation II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[453/3167] PWY-401
galactolipid biosynthesis I
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[454/3167] PWY-4021
β-alanine betaine biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[455/3167] PWY-4041
γ-glutamyl cycle
(4 Reactions)

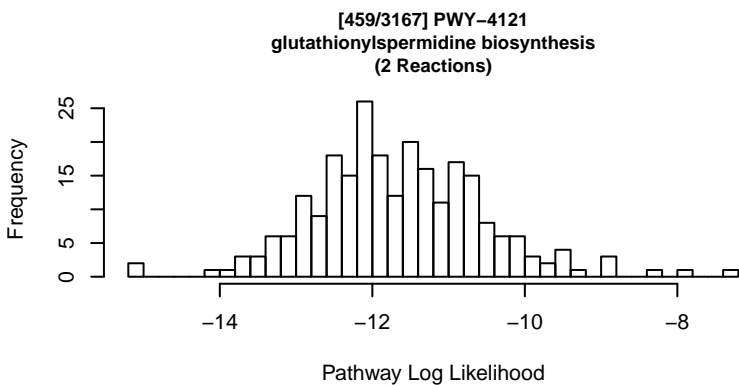
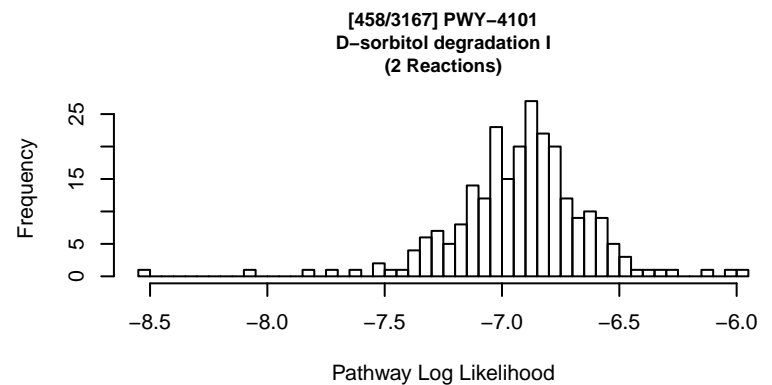
Zeros/-Inf for reaction(s) in Pathway

[456/3167] PWY-4061
glutathione-mediated detoxification I
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[457/3167] PWY-4081
glutathione-peroxide redox reactions
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



[460/3167] PWY-4161
superpathway of benzoxazinoid glucosides biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[461/3167] PWY-4181
glutathione amide metabolism
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[462/3167] PWY-4201
volatile cinnamic ester biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

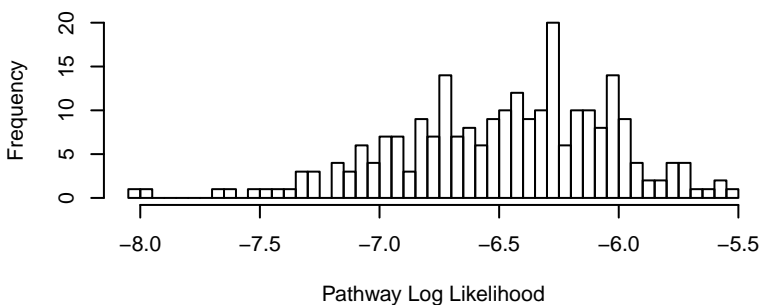
[463/3167] PWY-4202
arsenic detoxification (mammals)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[464/3167] PWY-4203
volatile benzenoid biosynthesis I (ester formation)
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

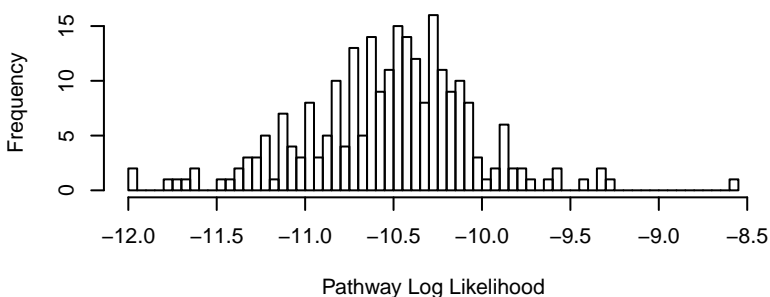
[465/3167] PWY-4261
glycerol degradation I
(2 Reactions)



[466/3167] PWY-4281
L-proline biosynthesis IV
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

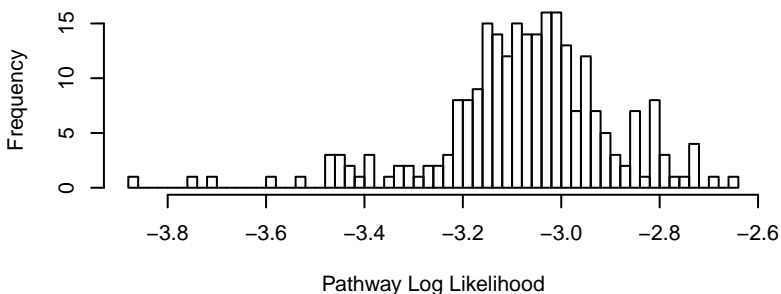
[467/3167] PWY-43
putrescine biosynthesis II
(3 Reactions)



[468/3167] PWY-4302
aerobic respiration III (alternative oxidase pathway)
(3 Reactions)

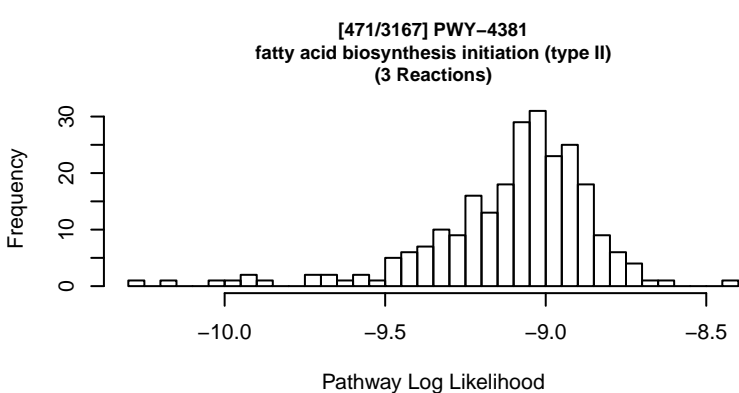
Missing 1 Reaction(s) from Pathway.

[469/3167] PWY-4341
L-glutamate biosynthesis V
(1 Reactions)



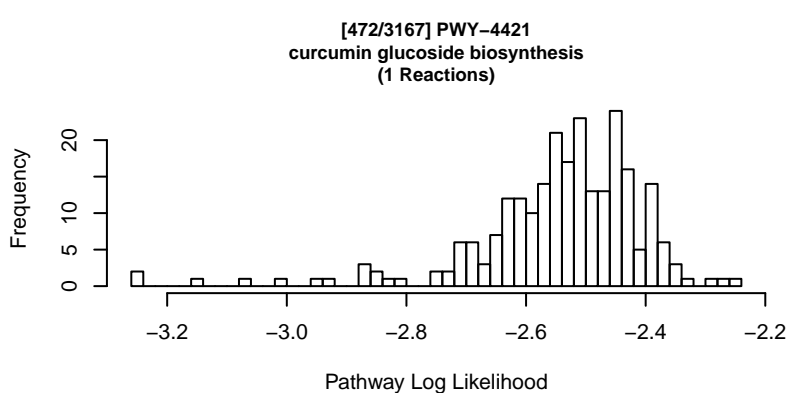
[470/3167] PWY-4361
***S*-methyl-5-thio- α -D-ribose 1-phosphate degradation I**
(8 Reactions)

Missing 1 Reaction(s) from Pathway.



[473/3167] PWY-4441
DIMBOA-glucoside activation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

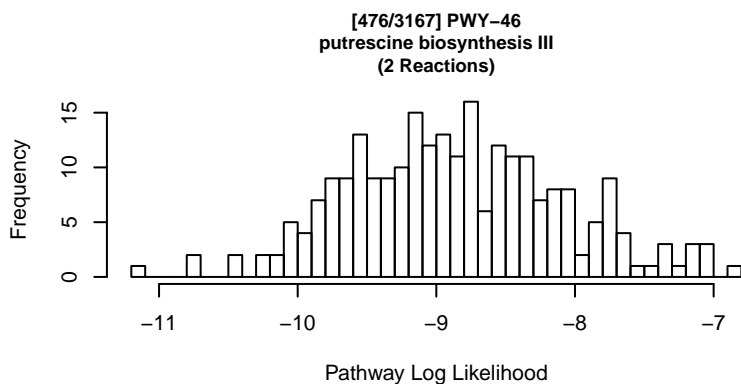


[474/3167] PWY-4502
wightone and luteone biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[475/3167] PWY-4521
arsenite to oxygen electron transfer
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[477/3167] PWY-4601
arsenate reduction (respiratory)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[478/3167] PWY-4621
arsenic detoxification (yeast)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[479/3167] PWY-4661
1D-*myo*-inositol hexakisphosphate biosynthesis III (*Spirodela polyrrhiza*)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[480/3167] PWY-4681
kievitone biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[481/3167] PWY-4702
phytate degradation I
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[482/3167] PWY-4722
creatinine degradation II
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

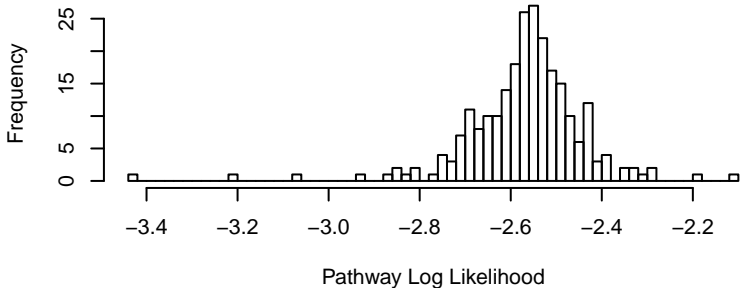
[483/3167] PWY-4741
creatinine degradation III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[484/3167] PWY-4781
phytate degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

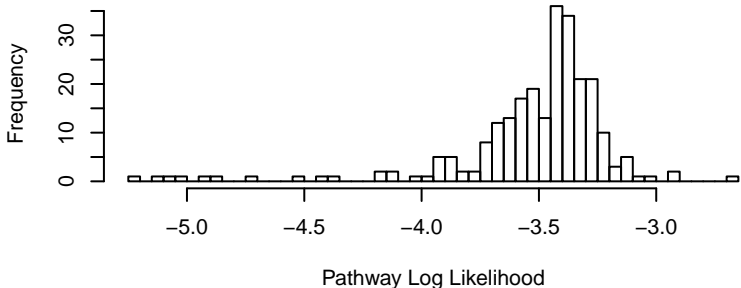
[485/3167] PWY-4801
aloesone biosynthesis I
(1 Reactions)



[486/3167] PWY-481
ethylbenzene degradation (anaerobic)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

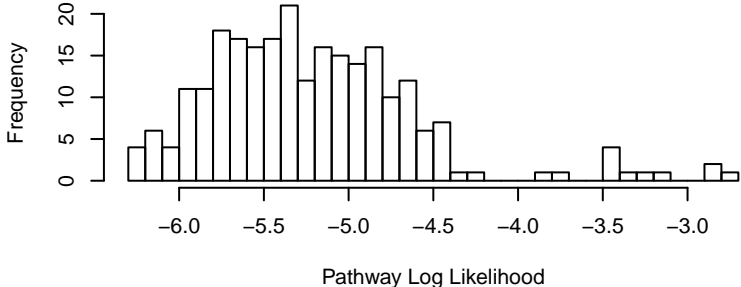
[487/3167] PWY-4821
UDP-α-D-xylose biosynthesis
(1 Reactions)



[488/3167] PWY-4841
UDP-α-D-glucuronate biosynthesis (from <i>myo</i>-inositol)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[489/3167] PWY-4861
UDP-α-D-galacturonate biosynthesis I (from UDP-D-glucuronate)
(1 Reactions)



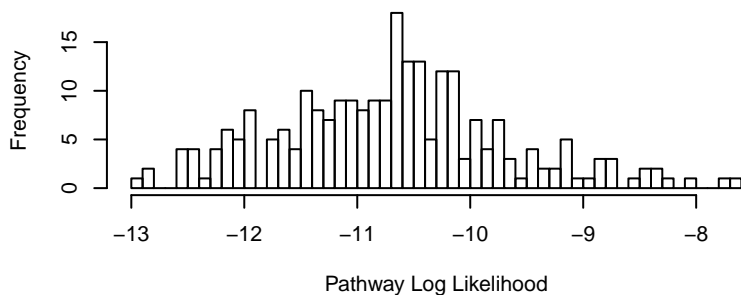
[490/3167] PWY-4921
protein citrullination
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

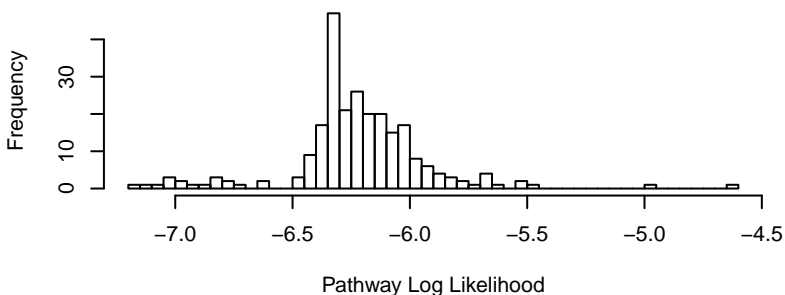
[491/3167] PWY-4922
6-methoxymellein biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

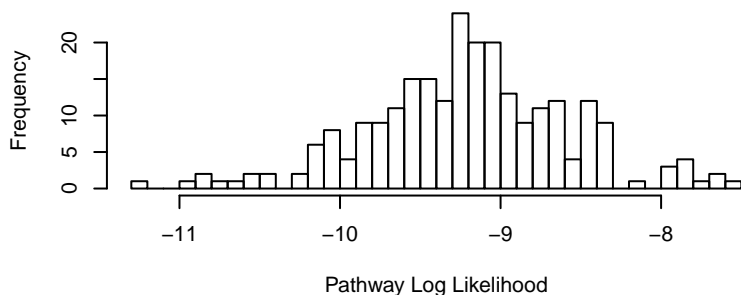
[492/3167] PWY-4942
sterculate biosynthesis
(2 Reactions)



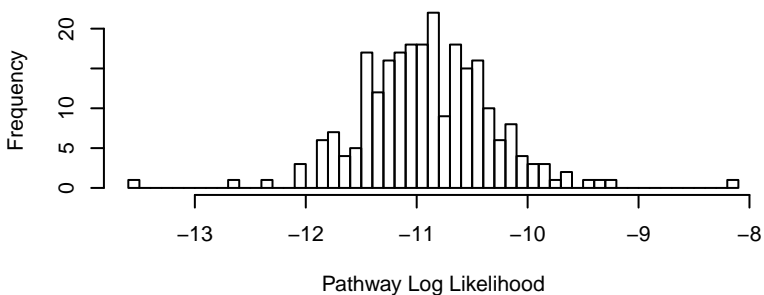
[493/3167] PWY-4961
β-pyrazole-1-ylalanine biosynthesis
(1 Reactions)



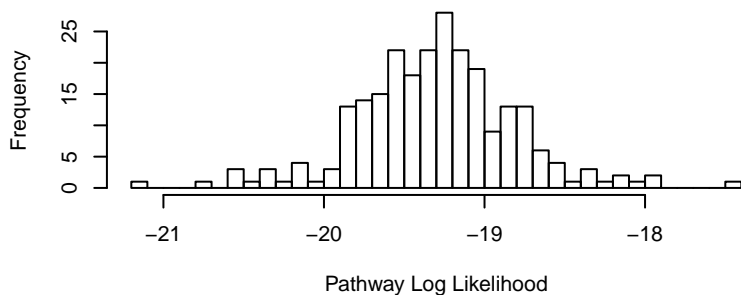
[494/3167] PWY-4981
L-proline biosynthesis II (from arginine)
(2 Reactions)



[495/3167] PWY-4983
nitric oxide biosynthesis II (mammals)
(3 Reactions)



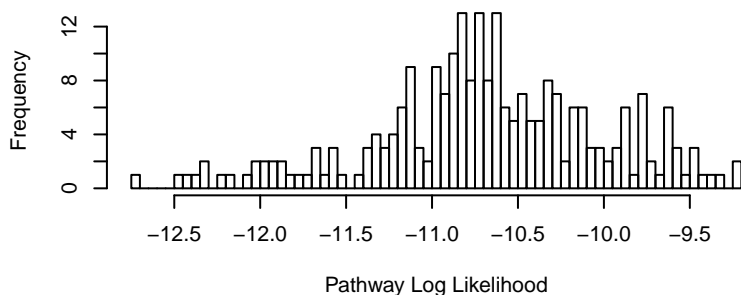
[496/3167] PWY-4984
urea cycle
(5 Reactions)



[497/3167] PWY-4985
mimosine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[498/3167] PWY-5
canavanine biosynthesis
(3 Reactions)



[499/3167] PWY-5001
tetrahydroxanthone biosynthesis (from benzoate)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[500/3167] PWY-5002
tetrahydroxanthone biosynthesis (from 3-hydroxybenzoate)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

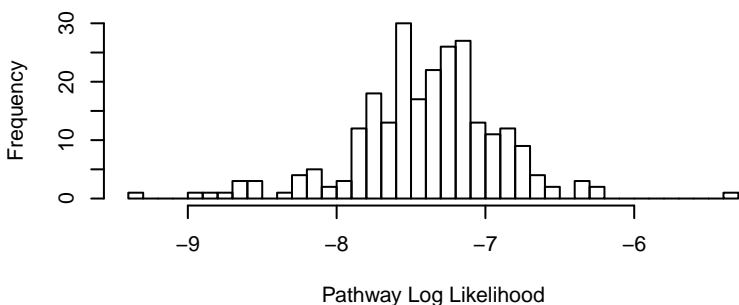
[501/3167] PWY-5021
willardiine and isowillardiine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

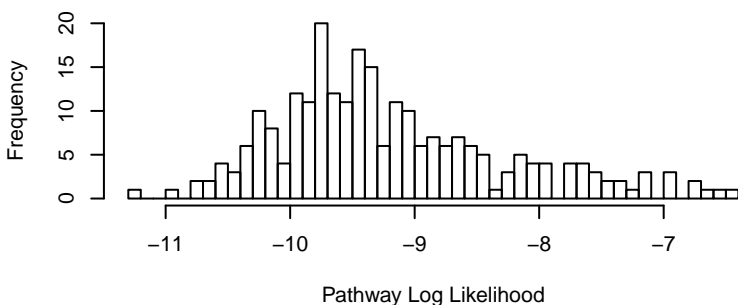
[502/3167] PWY-5022
4-aminobutanoate degradation V
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

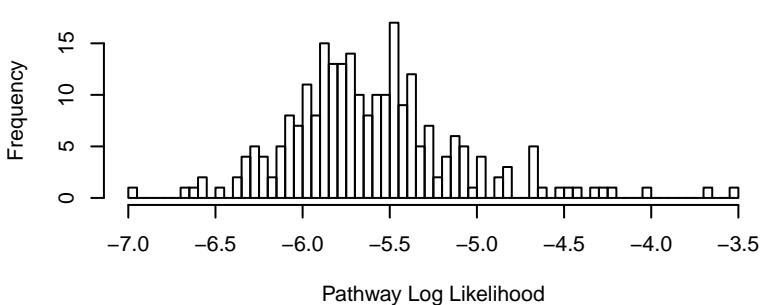
[503/3167] PWY-5024
L-arginine degradation XI
(2 Reactions)



[504/3167] PWY-5025
indole-3-acetate biosynthesis IV (bacteria)
(2 Reactions)



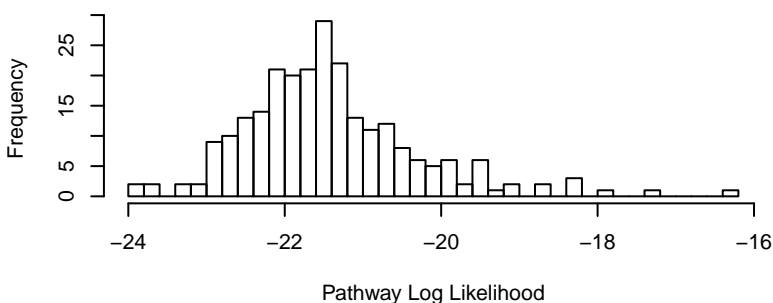
[505/3167] PWY-5026
indole-3-acetate biosynthesis V (bacteria and fungi)
(1 Reactions)



[506/3167] PWY-5027
phyloquinol biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

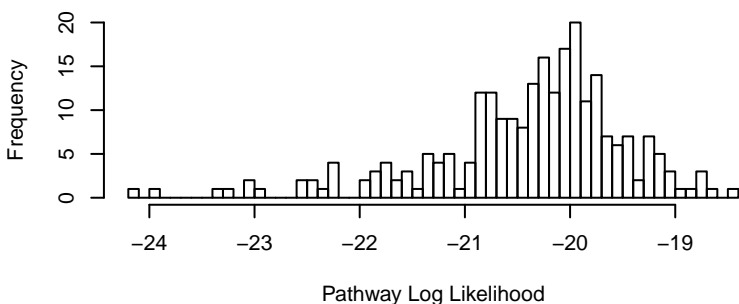
[507/3167] PWY-5028
L-histidine degradation II
(5 Reactions)



[508/3167] PWY-5029
3-(imidazol-5-yl)lactate salvage
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[509/3167] PWY-5030
L-histidine degradation III
(6 Reactions)



[510/3167] PWY-5031
L-histidine degradation V
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[511/3167] PWY-5032
ent-kaurene biosynthesis I
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[512/3167] PWY-5033
nicotinate degradation II
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[513/3167] PWY-5035
gibberellin biosynthesis III (early C-13 hydroxylation)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[514/3167] PWY-5036
gibberellin biosynthesis II (early C-3 hydroxylation)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[515/3167] PWY-5037
caffeine biosynthesis I
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

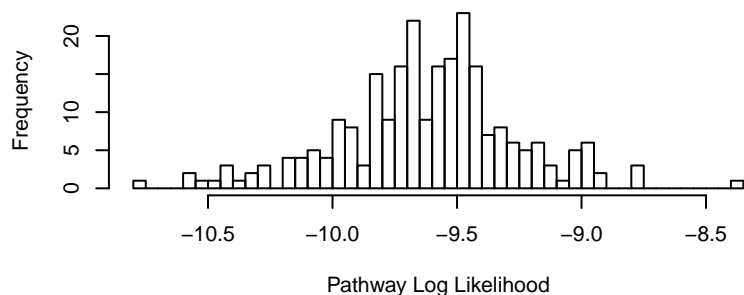
[516/3167] PWY-5038
caffeine biosynthesis II (via paraxanthine)
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[517/3167] PWY-5039
theobromine biosynthesis I
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

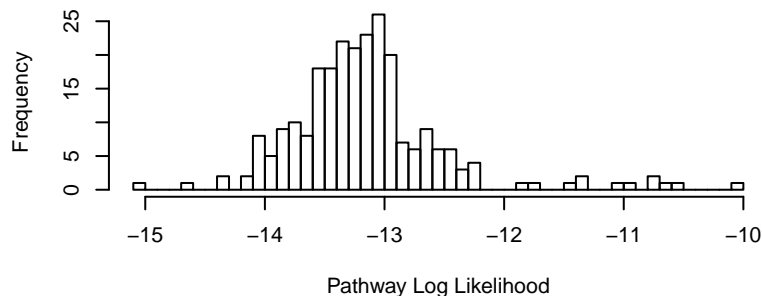
[518/3167] PWY-5041
S-adenosyl-L-methionine salvage II
(3 Reactions)

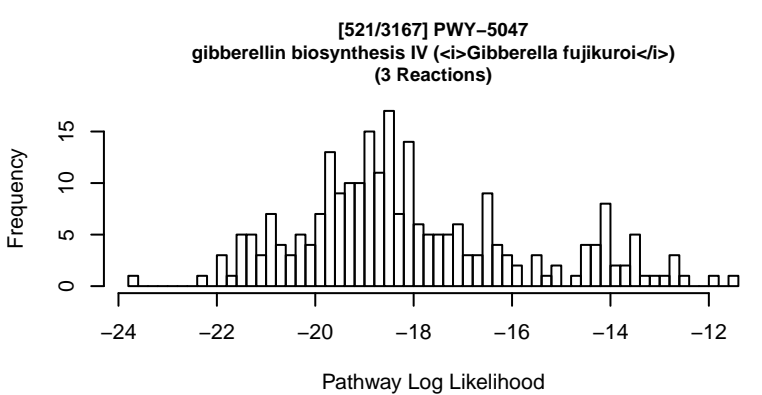


[519/3167] PWY-5045
pinosylvin metabolism
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[520/3167] PWY-5046
2-oxoisovalerate decarboxylation to isobutanoyl-CoA
(3 Reactions)





[522/3167] PWY-5048
rosmarinic acid biosynthesis I
(11 Reactions)

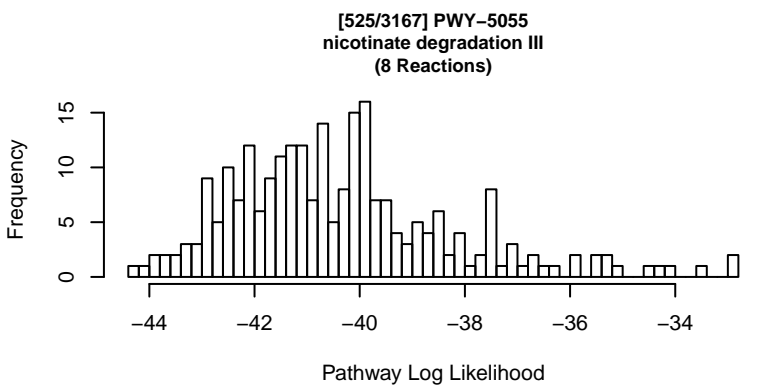
Missing 4 Reaction(s) from Pathway.

[523/3167] PWY-5049
rosmarinic acid biosynthesis II
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[524/3167] PWY-5054
D-sorbitol biosynthesis I
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



[526/3167] PWY-5057
L-valine degradation II
(3 Reactions)

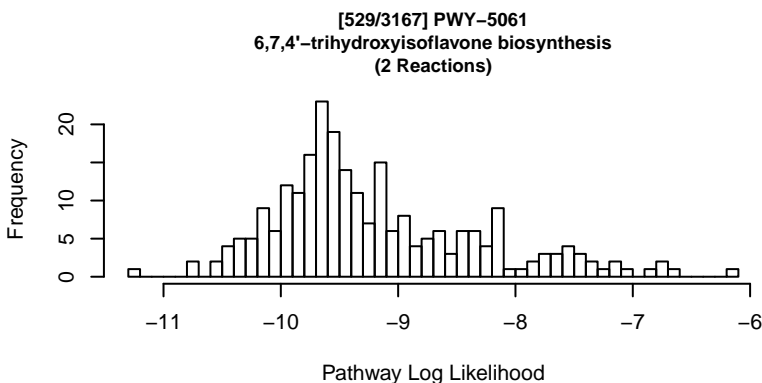
Zeros/-Inf for reaction(s) in Pathway

[527/3167] PWY-5059
pinobanksin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[528/3167] PWY-5060
luteolin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.



[530/3167] PWY-5064
chlorophyll <i>a</i> biosynthesis II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[531/3167] PWY-5067
glycogen biosynthesis II (from UDP-D-Glucose)
(3 Reactions)

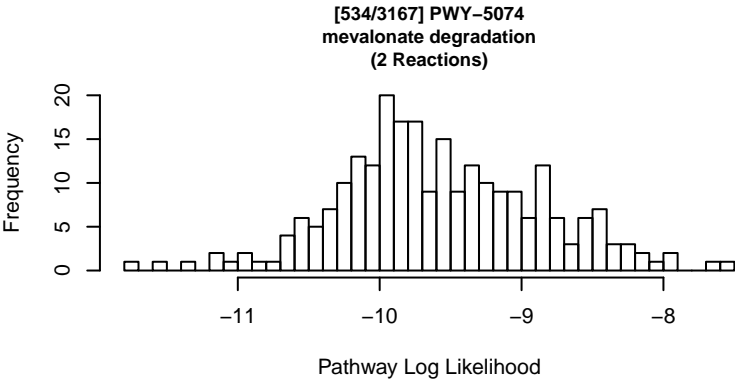
Missing 1 Reaction(s) from Pathway.

[532/3167] PWY-5068
chlorophyll cycle
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[533/3167] PWY-5070
gibberellin biosynthesis I (non C-3, non C-13 hydroxylation)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[535/3167] PWY-5075
L-leucine degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[536/3167] PWY-5076
L-leucine degradation III
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[537/3167] PWY-5078
L-isoleucine degradation II
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[538/3167] PWY-5079
L-phenylalanine degradation III
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[539/3167] PWY-5080
very long chain fatty acid biosynthesis I
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[540/3167] PWY-5081
L-tryptophan degradation VIII (to tryptophol)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

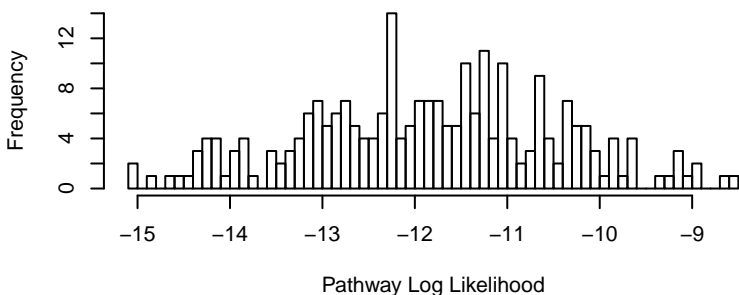
[541/3167] PWY-5082
L-methionine degradation III
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[542/3167] PWY-5083
NAD(P)/NADPH interconversion
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

[543/3167] PWY-5084
2-oxoglutarate decarboxylation to succinyl-CoA
(3 Reactions)



[544/3167] PWY-5086
chlorophyll *a* biosynthesis I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

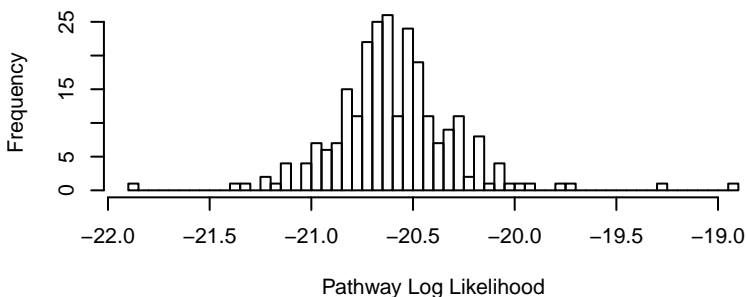
[545/3167] PWY-5087
L-glutamate degradation VI (to pyruvate)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[546/3167] PWY-5094
naringenin glycoside biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[547/3167] PWY-5097
L-lysine biosynthesis VI
(7 Reactions)



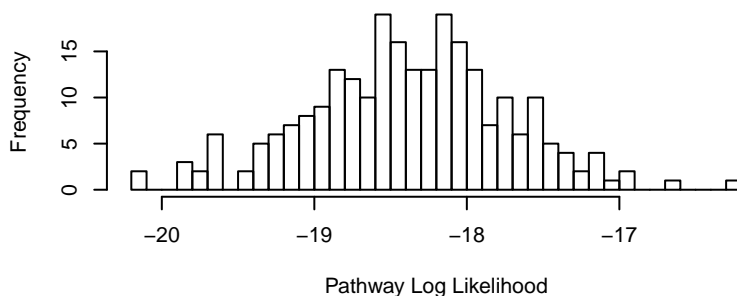
[548/3167] PWY-5098
chlorophyll *a* degradation I
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[549/3167] PWY-5101
L-isoleucine biosynthesis II
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

[550/3167] PWY-5103
L-isoleucine biosynthesis III
(6 Reactions)



[551/3167] PWY-5104
L-isoleucine biosynthesis IV
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

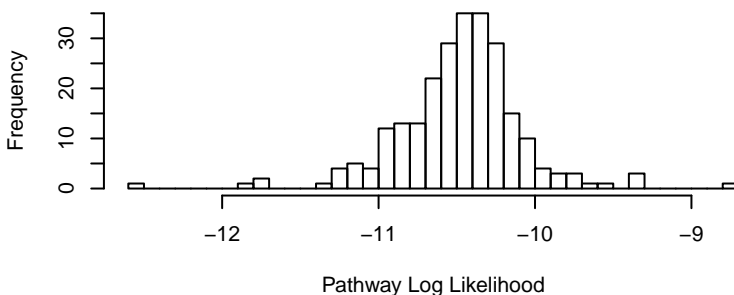
[552/3167] PWY-5105
hesperitin glycoside biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[553/3167] PWY-5107
phytol salvage pathway
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[554/3167] PWY-5108
L-isoleucine biosynthesis V
(3 Reactions)



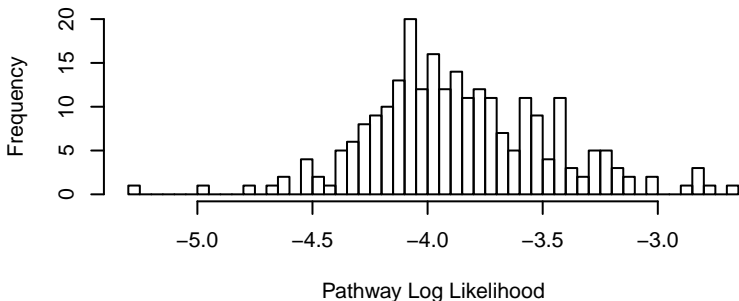
[555/3167] PWY-5109
propanoate fermentation to 2-methylbutanoate
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[556/3167] PWY-5110
trigonelline biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[557/3167] PWY-5113
UDP-D-apiose biosynthesis (from UDP-D-glucuronate)
(1 Reactions)



[558/3167] PWY-5115
GDP-L-galactose biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[559/3167] PWY-5116
sakuranetin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

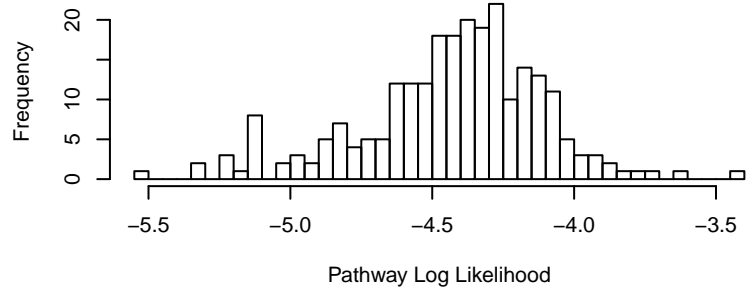
[560/3167] PWY-5118
ponciretin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

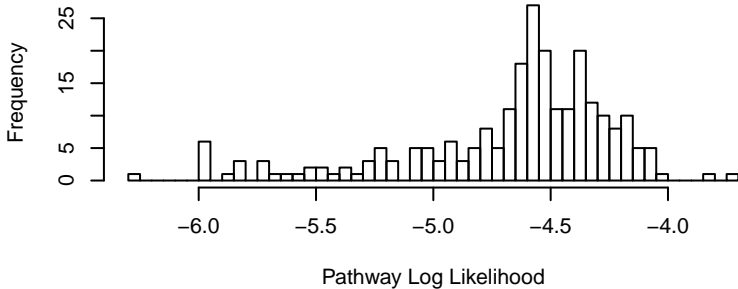
[561/3167] PWY-5119
acacetin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

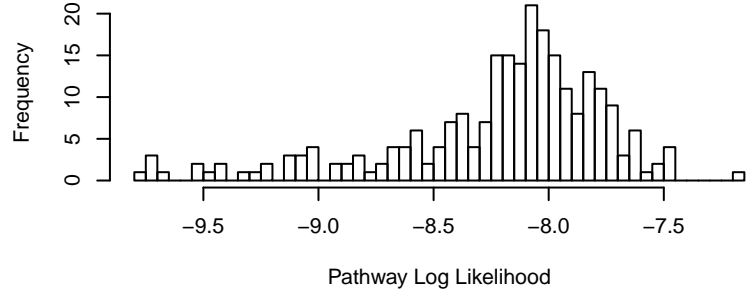
[562/3167] PWY-5120
geranylgeranyl diphosphate biosynthesis
(1 Reactions)



[563/3167] PWY-5122
geranyl diphosphate biosynthesis
(1 Reactions)



[564/3167] PWY-5123
<i>trans, trans</i>-farnesyl diphosphate biosynthesis
(2 Reactions)



[565/3167] PWY-5125
anthocyanin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[566/3167] PWY-5129
sphingolipid biosynthesis (plants)
(12 Reactions)

Missing 6 Reaction(s) from Pathway.

[567/3167] PWY-5130
2-oxobutanoate degradation I
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[568/3167] PWY-5132
lupulone and humulone biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[569/3167] PWY-5133
colupulone and cohumulone biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

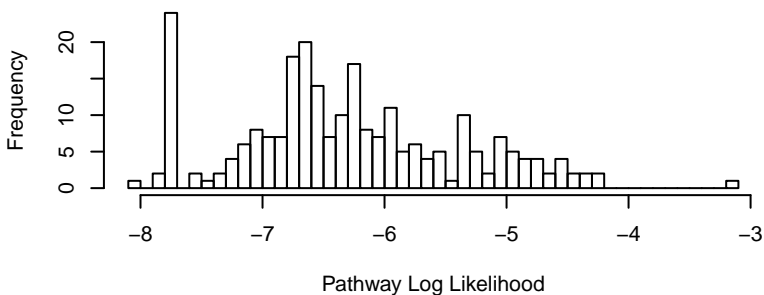
[570/3167] PWY-5135
xanthohumol biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[571/3167] PWY-5136
fatty acid β-oxidation II (plant peroxisome)
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[572/3167] PWY-5137
fatty acid β-oxidation III (unsaturated, odd number)
(1 Reactions)



[573/3167] PWY-5138
fatty acid β-oxidation IV (unsaturated, even number)
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

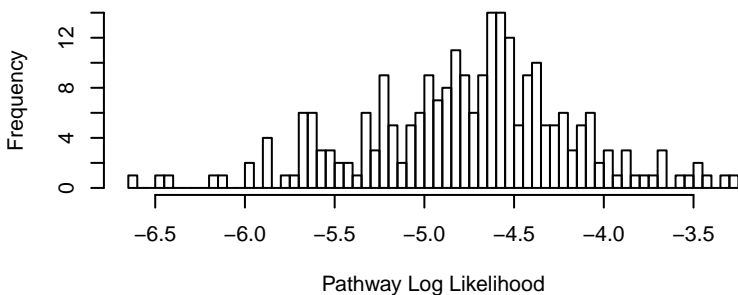
[574/3167] PWY-5139
pelargonidin conjugates biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

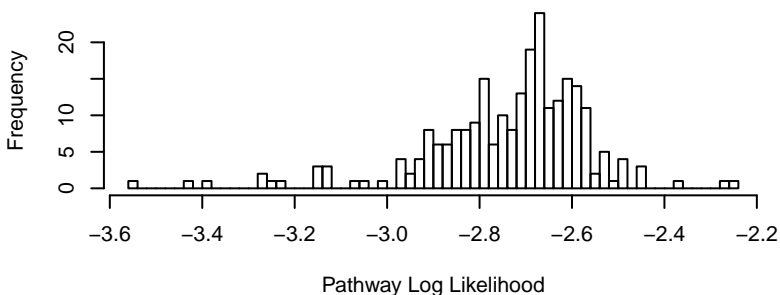
[575/3167] PWY-5140
cannabinoid biosynthesis
(6 Reactions)

Missing 5 Reaction(s) from Pathway.

[576/3167] PWY-5142
acyl-[acyl-carrier protein] thioesterase pathway
(1 Reactions)



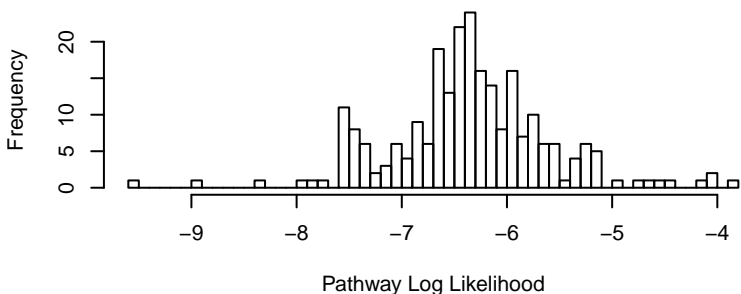
[577/3167] PWY-5143
long-chain fatty acid activation
(1 Reactions)



[578/3167] PWY-5147
oleate biosynthesis I (plants)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[579/3167] PWY-5148
acyl-CoA hydrolysis
(1 Reactions)



[580/3167] PWY-5151
L-tyrosine degradation II
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

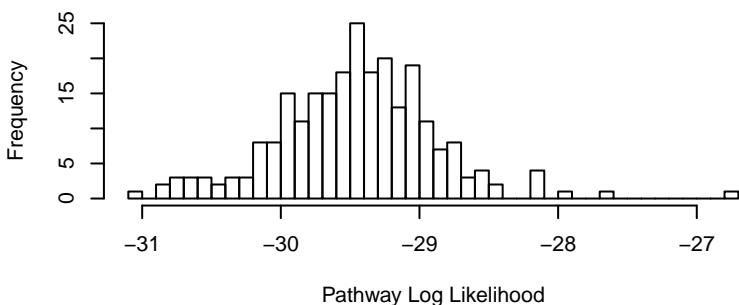
[581/3167] PWY-5152
leucodelphinidin biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

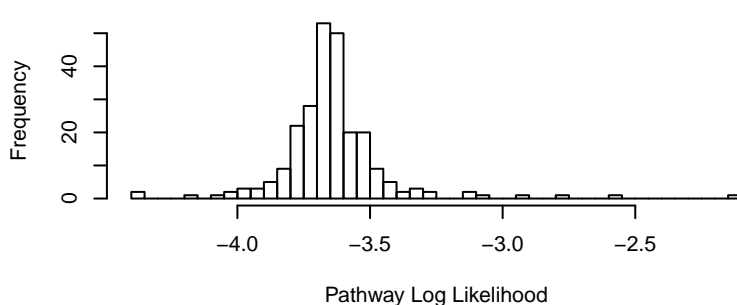
[582/3167] PWY-5153
anthocyanin biosynthesis (delphinidin 3-O-glucoside)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

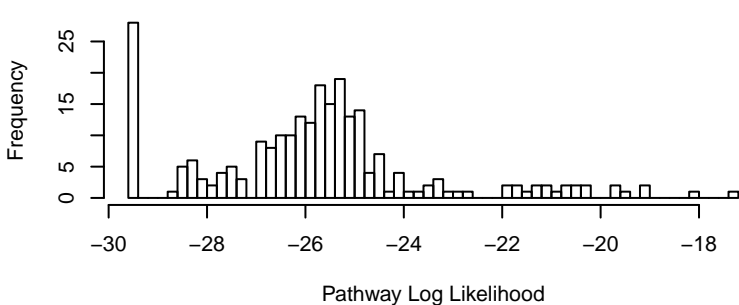
[583/3167] PWY-5154
L-arginine biosynthesis III (via *N*-acetyl-L-citrulline)
(9 Reactions)



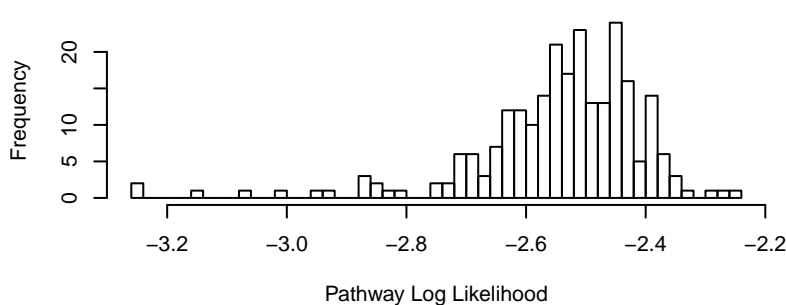
[584/3167] PWY-5155
β-alanine biosynthesis III
(1 Reactions)



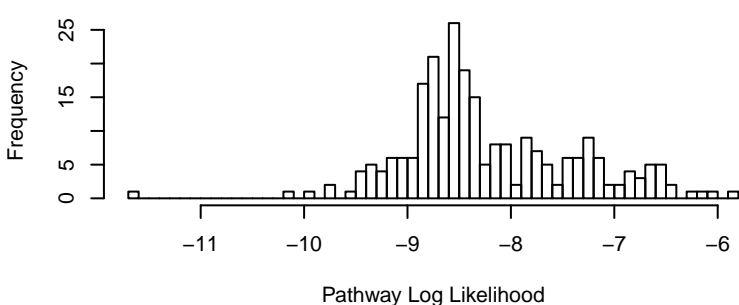
[585/3167] PWY-5159
***trans*-4-hydroxy-L-proline degradation II**
(4 Reactions)



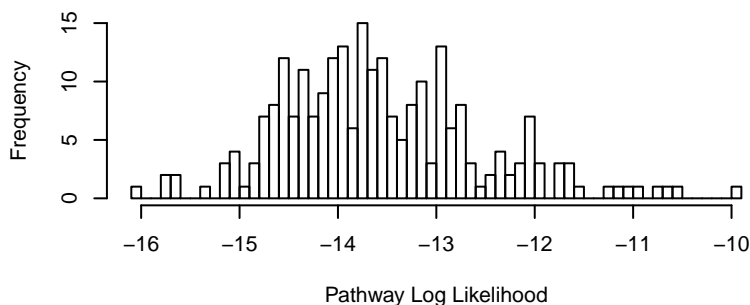
[586/3167] PWY-5160
rose anthocyanin biosynthesis I (via cyanidin 5-O-β-D-glucoside)
(1 Reactions)



[587/3167] PWY-5161
6'-deoxychalcone metabolism
(2 Reactions)



[588/3167] PWY-5162
2-hydroxypenta-2,4-dienoate degradation
(3 Reactions)



[589/3167] PWY-5163
***p*-cumate degradation to 2-hydroxypentadienoate**
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[590/3167] PWY-5165
4-toluenesulfonate degradation II
(1 Reactions)

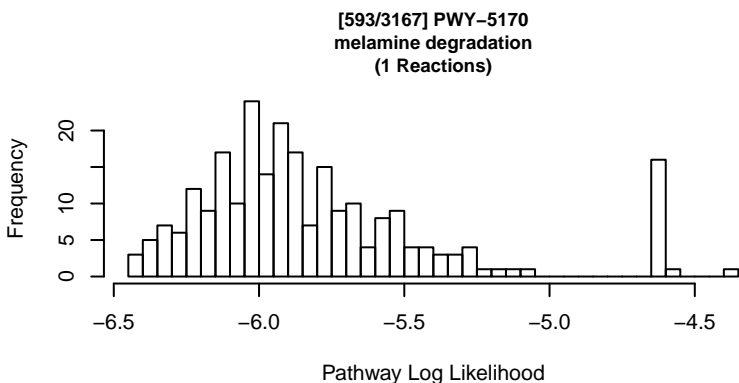
Zeros/-Inf for reaction(s) in Pathway

[591/3167] PWY-5168
ferulate and sinapate biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[592/3167] PWY-5169
cyanuric acid degradation II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[594/3167] PWY-5172
acetyl-CoA biosynthesis from citrate
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[595/3167] PWY-5174
capsanthin and capsorubin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

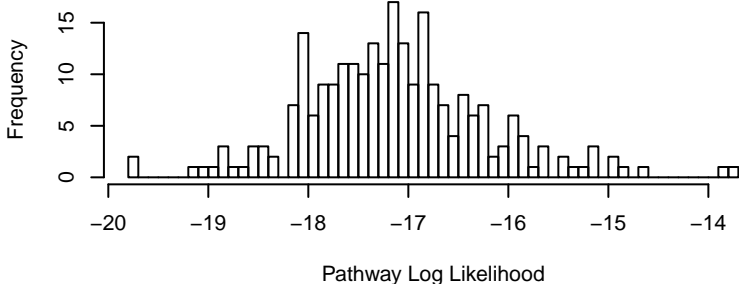
[596/3167] PWY-5175
lactucaxanthin biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

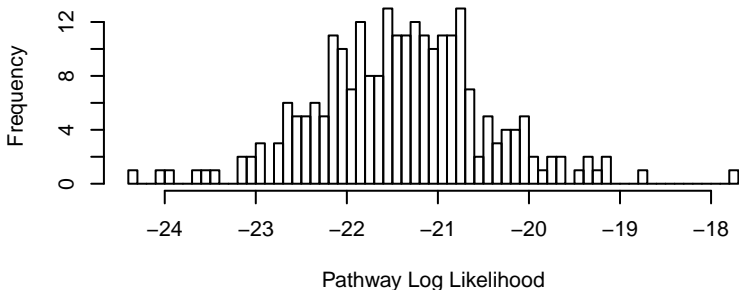
[597/3167] PWY-5176
coumarin biosynthesis (via 2-coumarate)
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

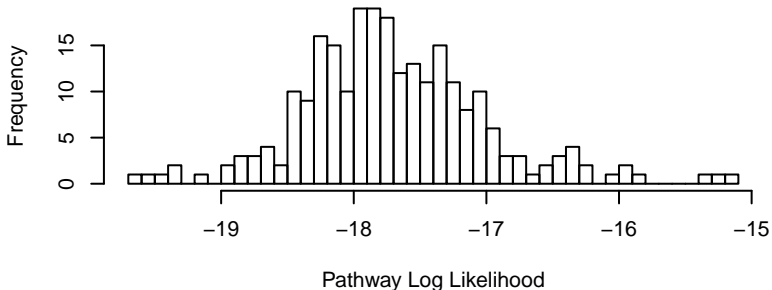
[598/3167] PWY-5177
glutaryl-CoA degradation
(4 Reactions)

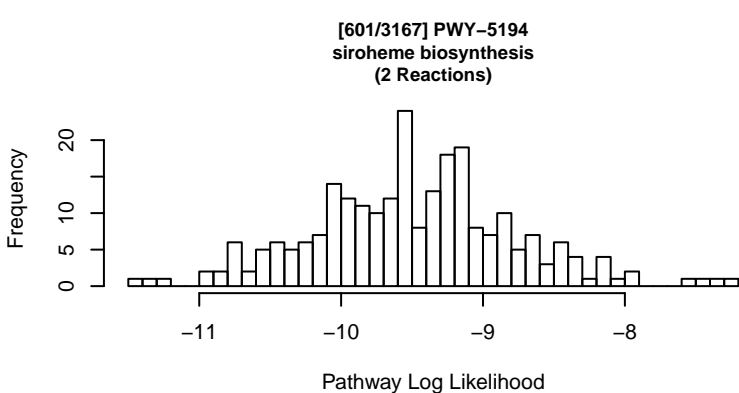


[599/3167] PWY-5188
tetrapyrrole biosynthesis I (from glutamate)
(6 Reactions)



[600/3167] PWY-5189
tetrapyrrole biosynthesis II (from glycine)
(4 Reactions)





[602/3167] PWY-5195
artemisinin and arteannuin B biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[603/3167] PWY-5196
factor 430 biosynthesis
(5 Reactions)

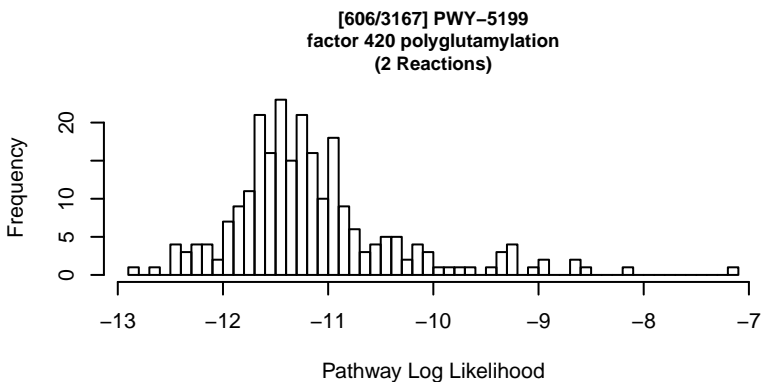
Missing 2 Reaction(s) from Pathway.

[604/3167] PWY-5197
lactate biosynthesis (archaea)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[605/3167] PWY-5198
factor 420 biosynthesis II (mycobacteria)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.



[607/3167] PWY-5203
soybean saponin I biosynthesis
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

[608/3167] PWY-5207
coenzyme B/coenzyme M regeneration I (methanophenazine-dependent)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[609/3167] PWY-5209
methyl-coenzyme M oxidation to CO₂
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[610/3167] PWY-5247
methanogenesis from methylamine
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[611/3167] PWY-5248
methanogenesis from dimethylamine
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[612/3167] PWY-5250
methanogenesis from trimethylamine
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[613/3167] PWY-5254
methanofuran biosynthesis
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[614/3167] PWY-5258
methanogenesis from dimethylsulfide
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[615/3167] PWY-5259
methanogenesis from methanethiol
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

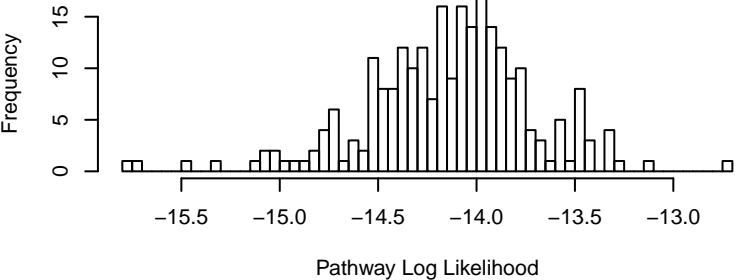
[616/3167] PWY-5260
methanogenesis from methylthiopropionate
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[617/3167] PWY-5261
methanogenesis from tetramethylammonium
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[618/3167] PWY-5265
peptidoglycan biosynthesis II (staphylococci)
(5 Reactions)



[619/3167] PWY-5267
glucosinolate activation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[620/3167] PWY-5268
salvianin biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[621/3167] PWY-5269
cardiolipin biosynthesis II
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[622/3167] PWY-5270
morphine biosynthesis
(10 Reactions)

Missing 9 Reaction(s) from Pathway.

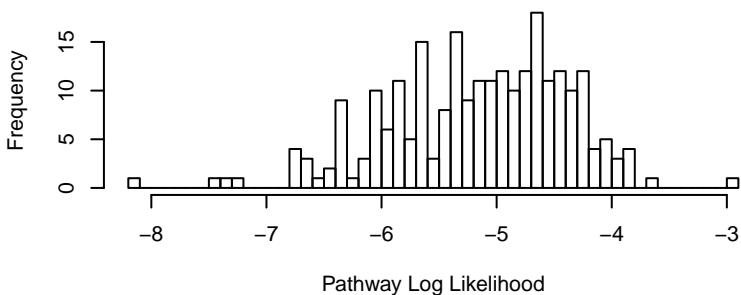
[623/3167] PWY-5271
abscisic acid degradation to phaseic acid
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[624/3167] PWY-5272
abscisic acid degradation by glucosylation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[625/3167] PWY-5274
sulfide oxidation II (flavocytochrome c)
(1 Reactions)



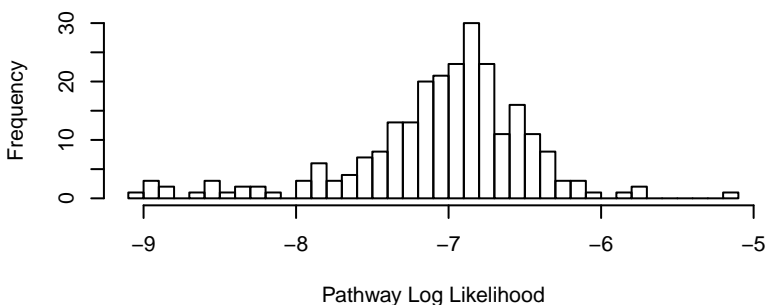
[626/3167] PWY-5276
sulfite oxidation I
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[627/3167] PWY-5277
thiosulfate disproportionation I (thiol-dependent)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[628/3167] PWY-5278
sulfite oxidation III
(2 Reactions)



[629/3167] PWY-5279
sulfite oxidation II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[630/3167] PWY-5280
L-lysine degradation IV
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[631/3167] PWY-5283
L-lysine degradation V
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

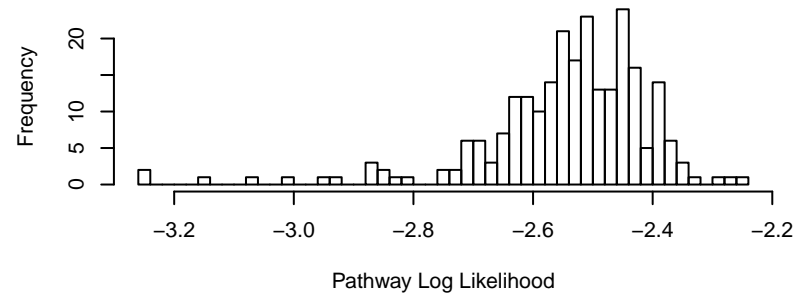
[632/3167] PWY-5284
shisonin biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[633/3167] PWY-5285
sulfide oxidation III (to sulfite)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[634/3167] PWY-5286
anthocyanidin sophoroside metabolism
(1 Reactions)



[635/3167] PWY-5287
sanguinarine and macarpine biosynthesis
(13 Reactions)

Missing 11 Reaction(s) from Pathway.

[636/3167] PWY-5288
astaxanthin biosynthesis (bacteria, fungi, algae)
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[637/3167] PWY-5290
secologanin and strictosidine biosynthesis
(11 Reactions)

Missing 9 Reaction(s) from Pathway.

[638/3167] PWY-5292
vindoline, vindorosine and vinblastine biosynthesis
(14 Reactions)

Missing 13 Reaction(s) from Pathway.

[639/3167] PWY-5295
ternatin C5 biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[640/3167] PWY-5296
thiosulfate oxidation III (multienzyme complex)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[641/3167] PWY-5297
siroheme amide biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[642/3167] PWY-5298
L-lysine degradation VI
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

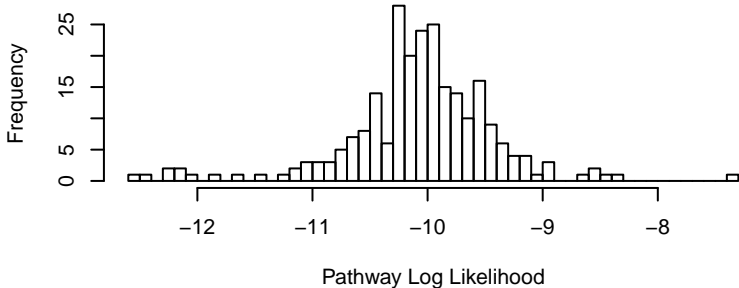
[643/3167] PWY-5301
ajmaline and sarpagine biosynthesis
(17 Reactions)

Missing 14 Reaction(s) from Pathway.

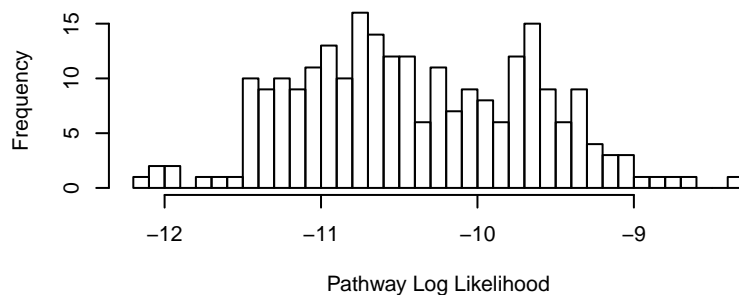
[644/3167] PWY-5302
sulfur disproportionation II (aerobic)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[645/3167] PWY-5303
thiosulfate oxidation II (via tetrathionate)
(2 Reactions)



[646/3167] PWY-5305
bixin biosynthesis
(3 Reactions)



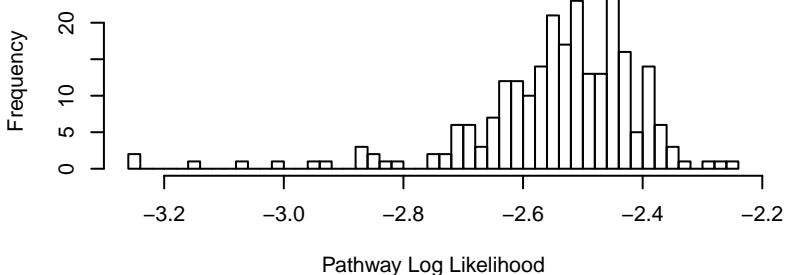
[647/3167] PWY-5306
superpathway of thiosulfate metabolism (*Desulfovibrio sulfodismutans*)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[648/3167] PWY-5307
gentiodelphin biosynthesis
(4 Reactions)

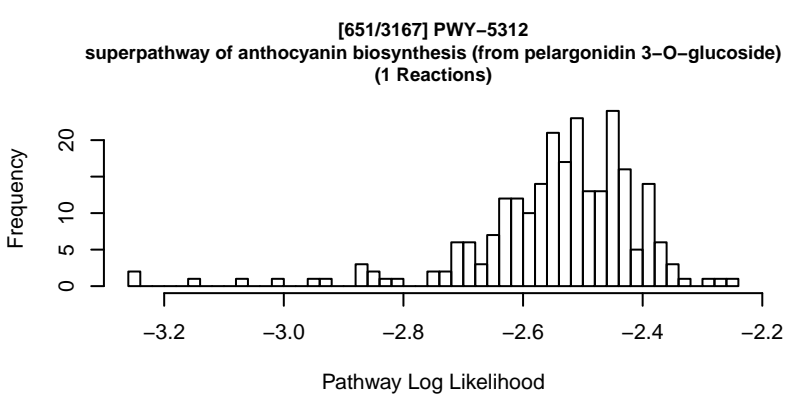
Missing 2 Reaction(s) from Pathway.

[649/3167] PWY-5310
superpathway of anthocyanin biosynthesis (from delphinidin 3-O-glucoside)
(1 Reactions)



[650/3167] PWY-5311
L-lysine degradation VII
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[652/3167] PWY-5313
superpathway of anthocyanin biosynthesis (from cyanidin and cyanidin 3-O-glucoside)
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[653/3167] PWY-5315
N-methyl- Δ^1 -pyrrolinium cation biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[654/3167] PWY-5316
nicotine biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[655/3167] PWY-5317
hyoscyamine and scopolamine biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[656/3167] PWY-5318
calystegine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[657/3167] PWY-5319
coumarin metabolism (to melilotic acid)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[658/3167] PWY-5320
kaempferol glycoside biosynthesis (Arabidopsis)
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[659/3167] PWY-5321
quercetin glycoside biosynthesis (Arabidopsis)
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[660/3167] PWY-5324
L-lysine degradation IX
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[661/3167] PWY-5326
sulfite oxidation IV (sulfite oxidase)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

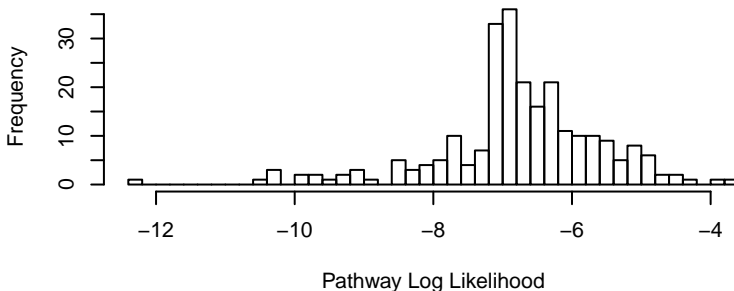
[662/3167] PWY-5329
L-cysteine degradation III
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[663/3167] PWY-5331
taurine biosynthesis I
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[664/3167] PWY-5332
sulfur reduction I
(1 Reactions)



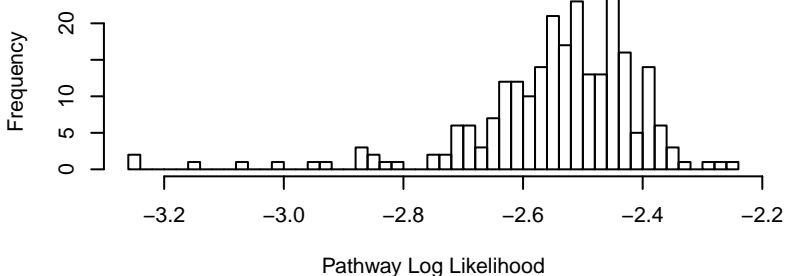
[665/3167] PWY-5336
carbon disulfide oxidation II (aerobic)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

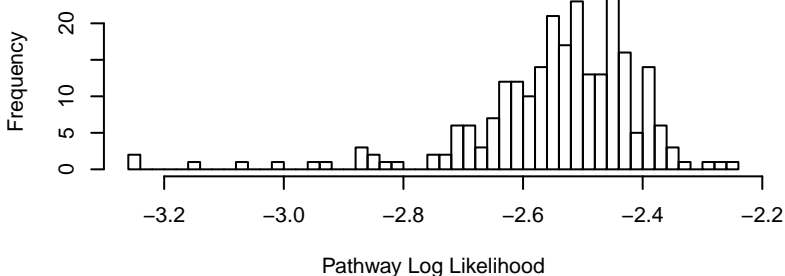
[666/3167] PWY-5337
stachyose biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

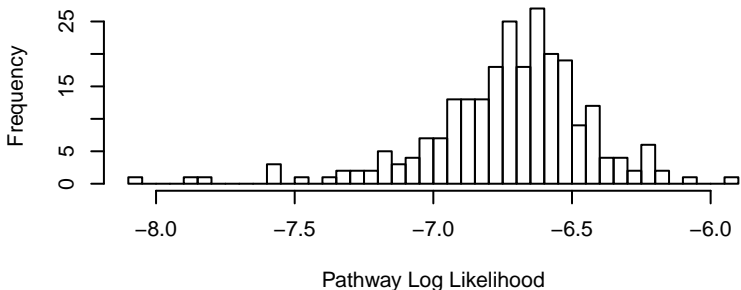
[667/3167] PWY-5338
galactosylcyclitol biosynthesis
(1 Reactions)



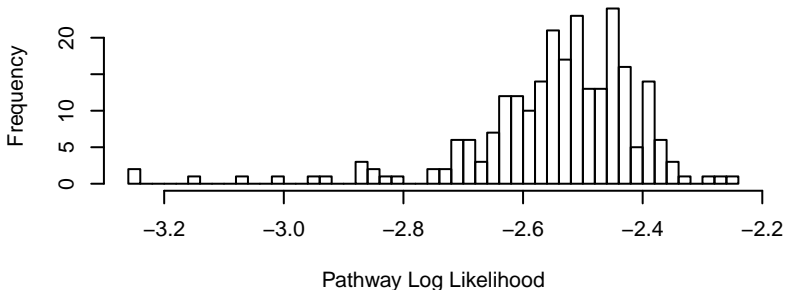
[668/3167] PWY-5339
chalcone 2'-O-glucoside biosynthesis
(1 Reactions)



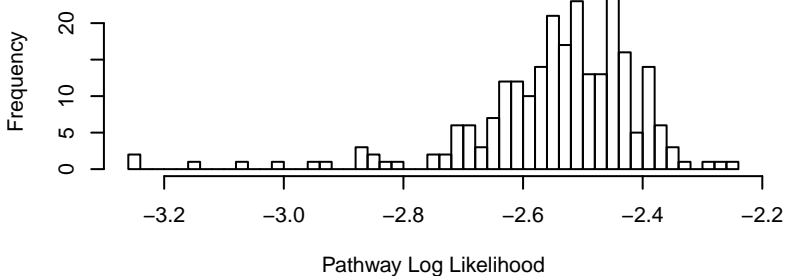
[669/3167] PWY-5340
sulfate activation for sulfonation
(2 Reactions)



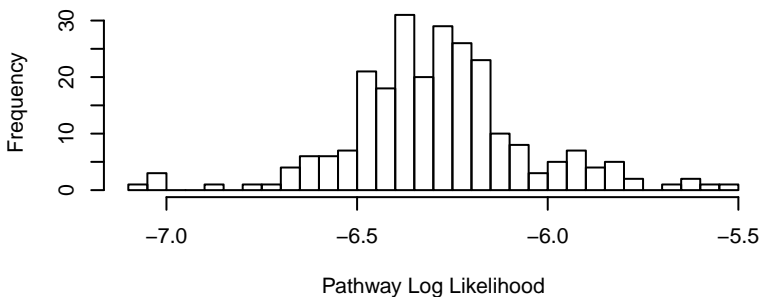
[670/3167] PWY-5342
ajugose biosynthesis I (galactinol-dependent)
(1 Reactions)



[671/3167] PWY-5343
ajugose biosynthesis II (galactinol-independent)
(1 Reactions)



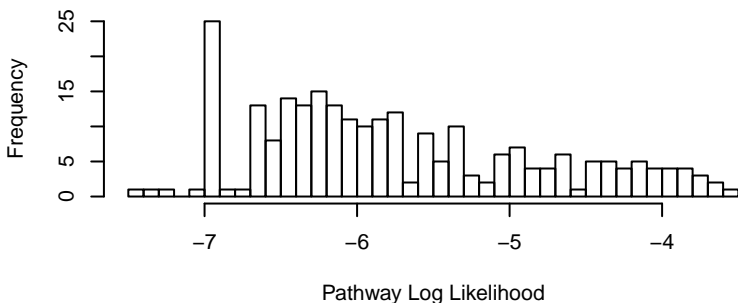
[672/3167] PWY-5344
L-homocysteine biosynthesis
(2 Reactions)



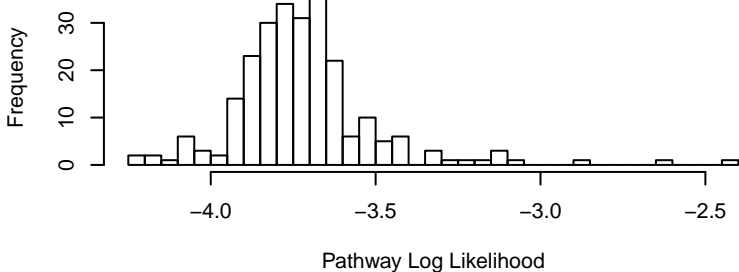
[673/3167] PWY-5348
kaempferol triglucoside biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[674/3167] PWY-5349
esculetin biosynthesis
(1 Reactions)



[675/3167] PWY-5350
thiosulfate disproportionation IV (rhodanese)
(1 Reactions)



[676/3167] PWY-5352
thiosulfate disproportionation II (cytochrome)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[677/3167] PWY-5353
arachidonate biosynthesis I (6-desaturase, lower eukaryotes)
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[678/3167] PWY-5355
nitroethane degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[679/3167] PWY-5358
tetrathionate reduction I (to thiosulfate)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[680/3167] PWY-5360
superpathway of tetrathionate reduction (<i>Salmonella typhimurium</i>)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[681/3167] PWY-5361
(5<i>Z</i>)-icosenoate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

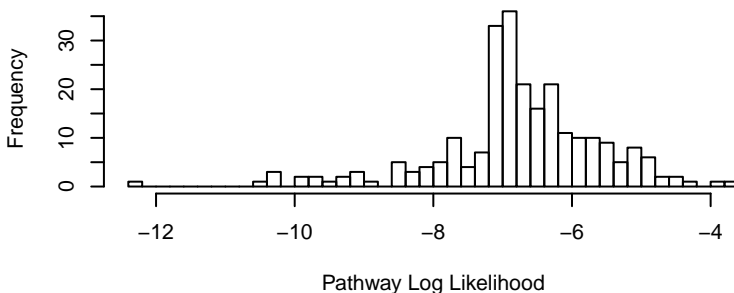
[682/3167] PWY-5362
sapienate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[683/3167] PWY-5363
chrysin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[684/3167] PWY-5364
sulfur reduction II (via polysulfide)
(1 Reactions)



[685/3167] PWY-5365
linear furanocoumarin biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[686/3167] PWY-5366
palmitoleate biosynthesis II (plants and bacteria)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[687/3167] PWY-5367
petroselinate biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[688/3167] PWY-5368
dimorphecolate biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[689/3167] PWY-5370
carbon tetrachloride degradation I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[690/3167] PWY-5372
carbon tetrachloride degradation II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[691/3167] PWY-5373
calendate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[692/3167] PWY-5374
punicate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

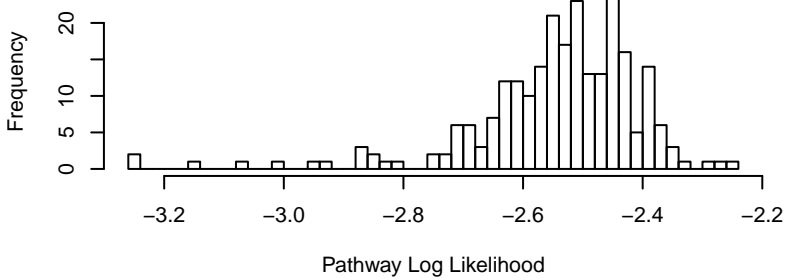
[693/3167] PWY-5375
α-eleostearate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

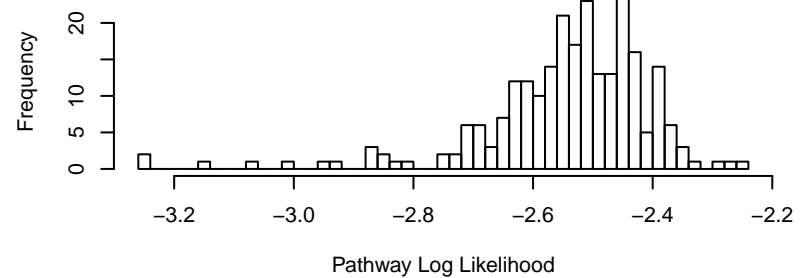
[694/3167] PWY-5377
α-amyrin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[695/3167] PWY-5379
B series fagopyritols biosynthesis
(1 Reactions)



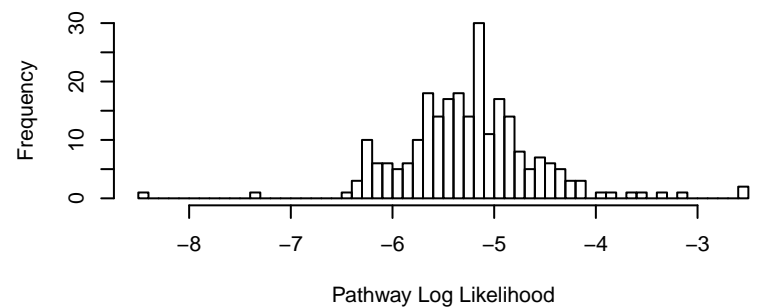
[696/3167] PWY-5380
A series fagopyritols biosynthesis
(1 Reactions)



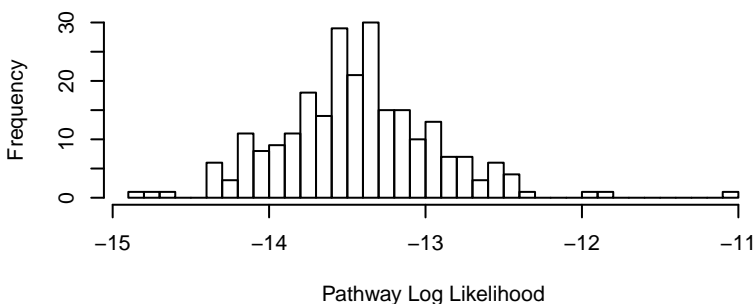
[697/3167] PWY-5381
NAD salvage (plants)
(12 Reactions)

Missing 3 Reaction(s) from Pathway.

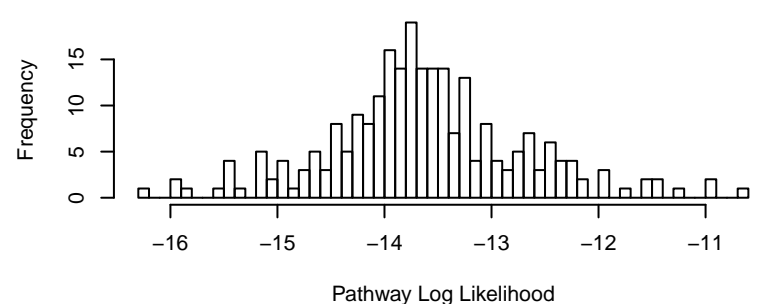
[698/3167] PWY-5382
hydrogen oxidation II (aerobic, NAD)
(1 Reactions)



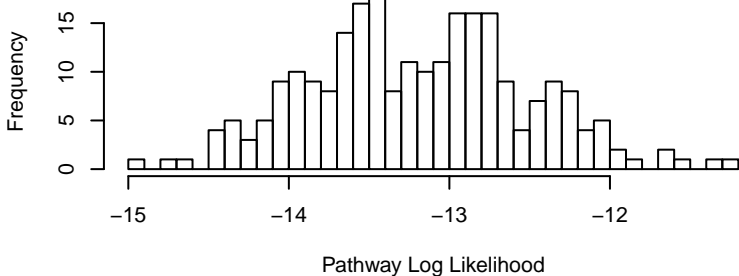
[699/3167] PWY-5384
sucrose degradation IV (sucrose phosphorylase)
(4 Reactions)



[700/3167] PWY-5386
methylglyoxal degradation I
(3 Reactions)



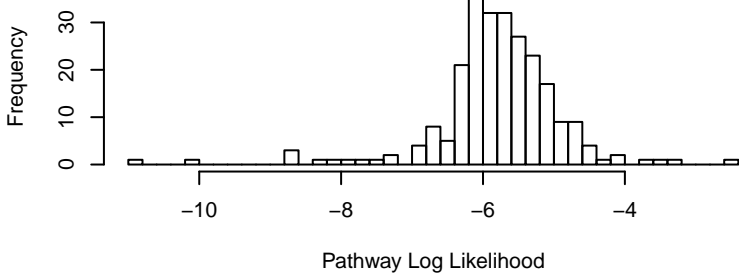
[701/3167] PWY-5386-1
methylglyoxal degradation VIII
(3 Reactions)



[702/3167] PWY-5388
N-glucosylnicotinate metabolism
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[703/3167] PWY-5389
3-methylthiopropionate biosynthesis
(1 Reactions)



[704/3167] PWY-5390
rutin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[705/3167] PWY-5391
syringetin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[706/3167] PWY-5392
reductive TCA cycle II
(10 Reactions)

Missing 1 Reaction(s) from Pathway.

[707/3167] PWY-5393
raspberry ketone biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[708/3167] PWY-5394
betalamic acid biosynthesis
(2 Reactions)

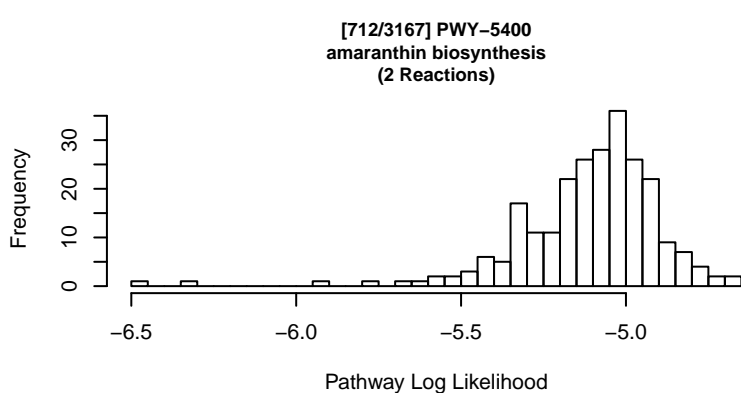
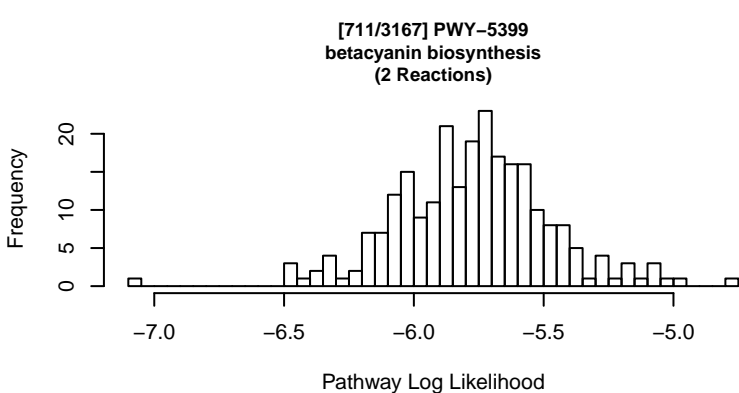
Missing 1 Reaction(s) from Pathway.

[709/3167] PWY-5397
crocetin biosynthesis
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[710/3167] PWY-5398
crocetin esters biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[713/3167] PWY-5403
betaxanthin biosynthesis (via dopamine)
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[714/3167] PWY-5404
betaxanthin biosynthesis (via dopaxanthin)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[715/3167] PWY-5406
divinyl ether biosynthesis I
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[716/3167] PWY-5407
9-lipoxygenase and 9-allene oxide synthase pathway
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[717/3167] PWY-5408
9-lipoxygenase and 9-hydroperoxide lyase pathway
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[718/3167] PWY-5409
divinyl ether biosynthesis II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[719/3167] PWY-5410
traumatin and (<i>Z</i>)-3-hexen-1-yl acetate biosynthesis
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[720/3167] PWY-5411
abietic acid biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[721/3167] PWY-5412
levopimaric acid biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

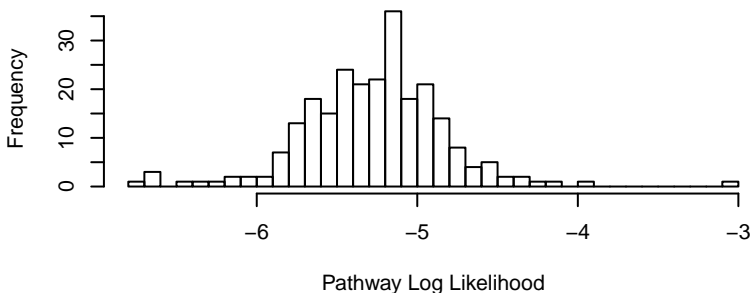
[722/3167] PWY-5413
neoabietic acid biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[723/3167] PWY-5414
palustric acid biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[724/3167] PWY-5418
phenol degradation I (aerobic)
(1 Reactions)



[725/3167] PWY-5419
catechol degradation to 2-hydroxypentadienoate II
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[726/3167] PWY-5421
dehydroabietic acid biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[727/3167] PWY-5422
isopimaric acid biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[728/3167] PWY-5423
oleoresin monoterpene volatiles biosynthesis
(8 Reactions)

Missing ALL Reaction(s) from Pathway.

[729/3167] PWY-5425
oleoresin sesquiterpene volatiles biosynthesis
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

[730/3167] PWY-5426
betaxanthin biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[731/3167] PWY-5427
naphthalene degradation (aerobic)
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[732/3167] PWY-5428
1,3-dimethylbenzene degradation to 3-methylbenzoate
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

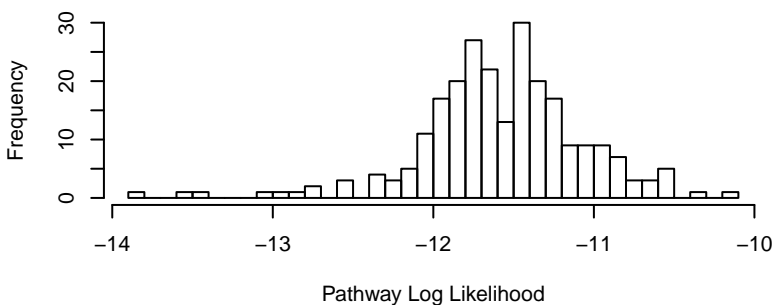
[733/3167] PWY-5429
1,4-dimethylbenzene degradation to 4-methylbenzoate
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[734/3167] PWY-5434
(3*E*)-4,8-dimethylnona-1,3,7-triene biosynthesis I
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

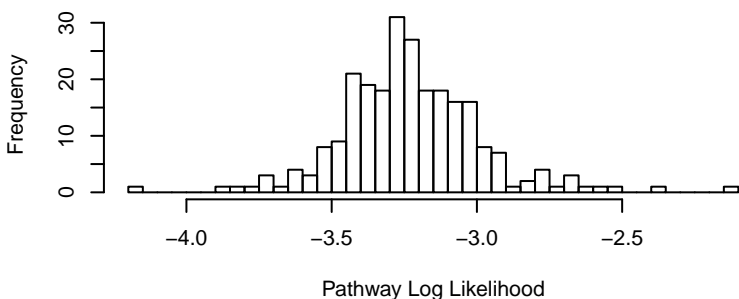
[735/3167] PWY-5436
L-threonine degradation IV
(3 Reactions)



[736/3167] PWY-5437
L-threonine degradation I
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

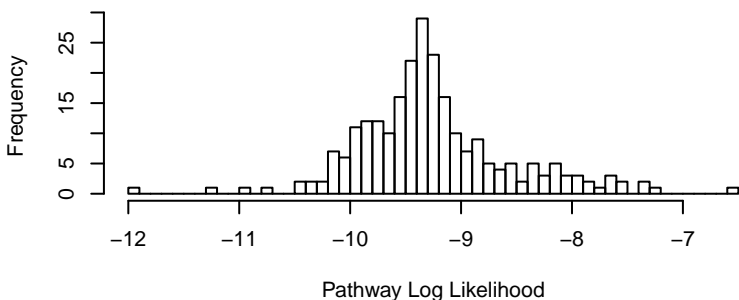
[737/3167] PWY-5439
betacyanin biosynthesis (via dopamine)
(1 Reactions)



[738/3167] PWY-5441
S-methyl-L-methionine cycle
(2 Reactions)

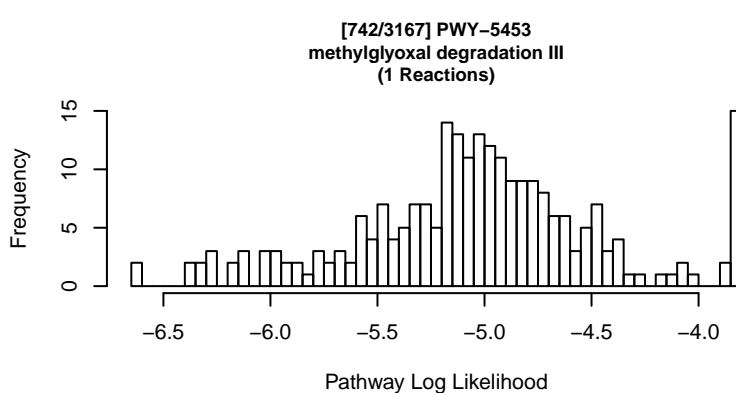
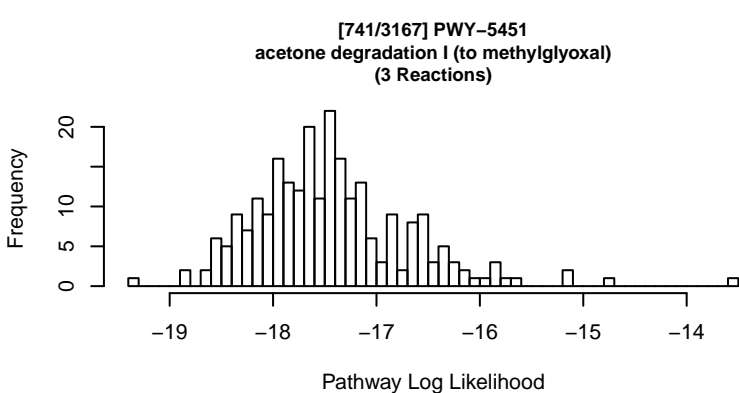
Missing 1 Reaction(s) from Pathway.

[739/3167] PWY-5443
aminopropanol phosphate biosynthesis I
(2 Reactions)



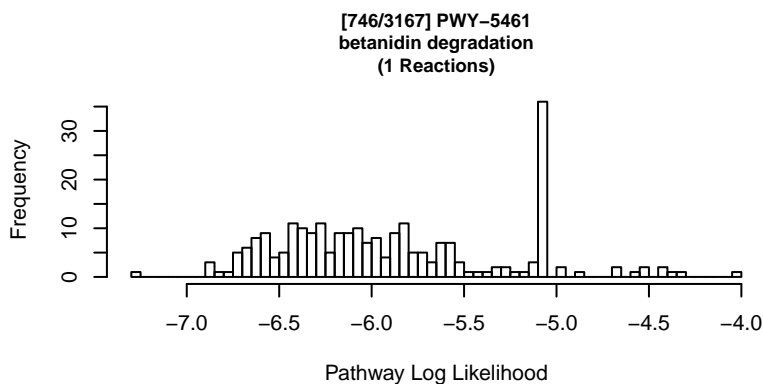
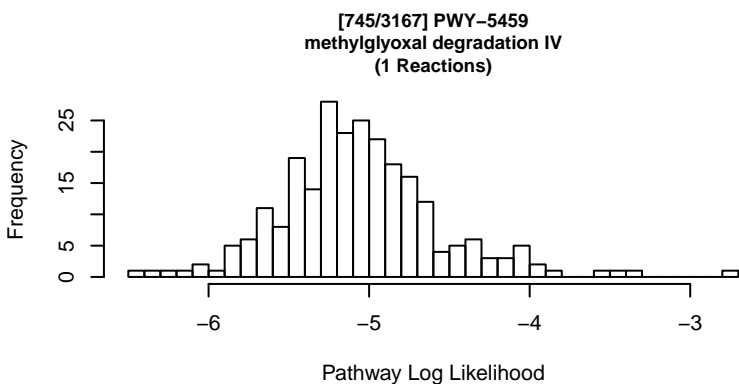
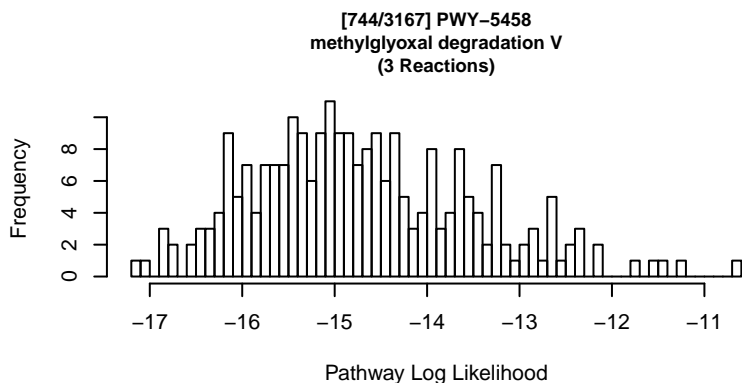
[740/3167] PWY-5450
benzene degradation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[743/3167] PWY-5456
methylglyoxal degradation VII
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[747/3167] PWY-5462
methylglyoxal degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[748/3167] PWY-5466
matairesinol biosynthesis
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[749/3167] PWY-5468
lupanine biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[750/3167] PWY-5469
sesamin biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[751/3167] PWY-5470
palmitine biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

[752/3167] PWY-5472
bisbenzylisoquinoline alkaloid biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[753/3167] PWY-5473
hydroxycinnamic acid serotonin amides biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

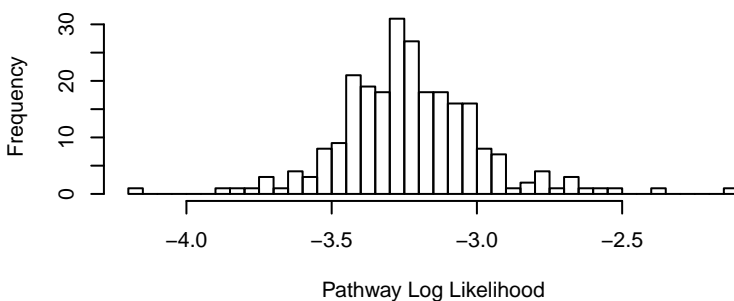
[754/3167] PWY-5474
hydroxycinnamic acid tyramine amides biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

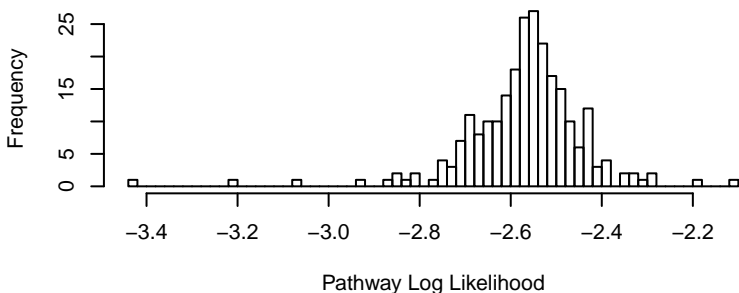
[755/3167] PWY-5475
pentagalloylglucose biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[756/3167] PWY-5476
cornusiiin E biosynthesis
(1 Reactions)



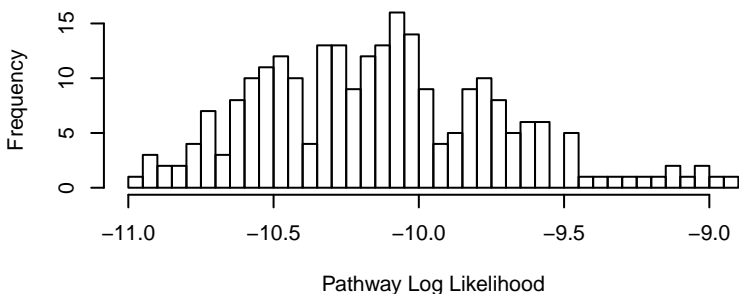
[757/3167] PWY-5477
gallotannin biosynthesis
(1 Reactions)



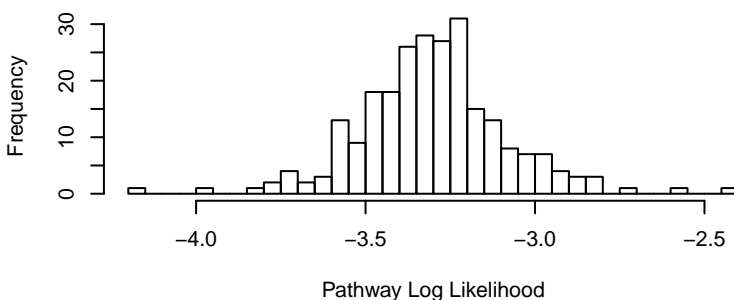
[758/3167] PWY-5479
6-methoxypodophyllotoxin biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[759/3167] PWY-5480
pyruvate fermentation to ethanol I
(3 Reactions)



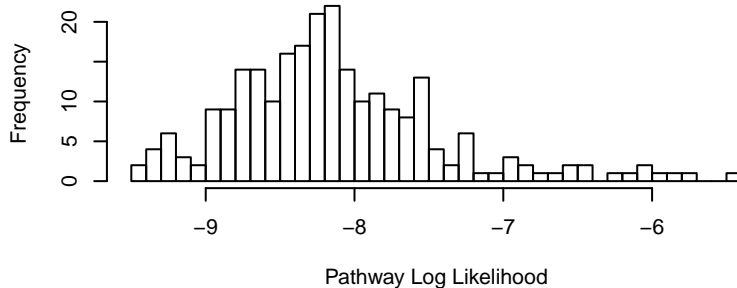
[760/3167] PWY-5481
pyruvate fermentation to (<i>S</i>)-lactate
(1 Reactions)



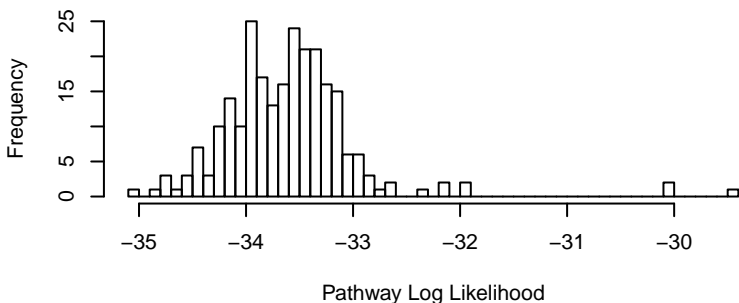
[761/3167] PWY-5482
pyruvate fermentation to acetate II
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

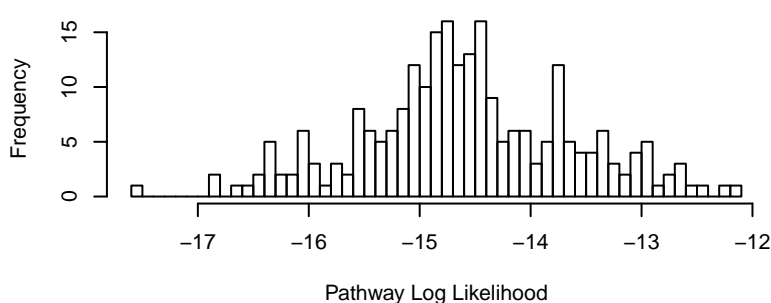
[762/3167] PWY-5483
pyruvate fermentation to acetate III
(2 Reactions)



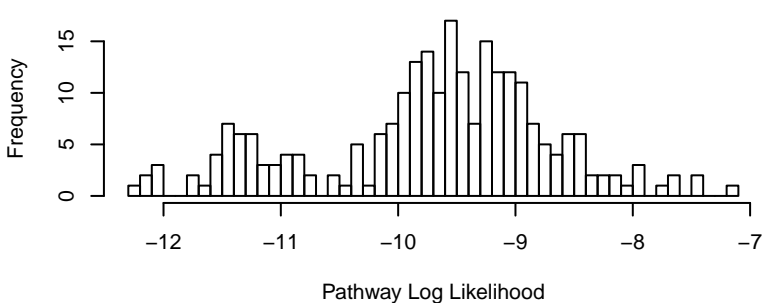
[763/3167] PWY-5484
glycolysis II (from fructose 6-phosphate)
(11 Reactions)



[764/3167] PWY-5485
pyruvate fermentation to acetate IV
(4 Reactions)



[765/3167] PWY-5486
pyruvate fermentation to ethanol II
(2 Reactions)



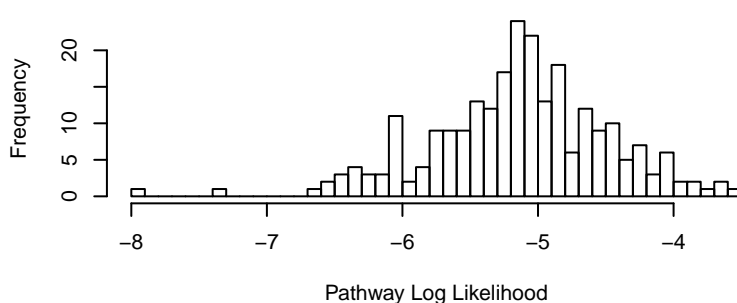
[766/3167] PWY-5487
4-nitrophenol degradation I
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

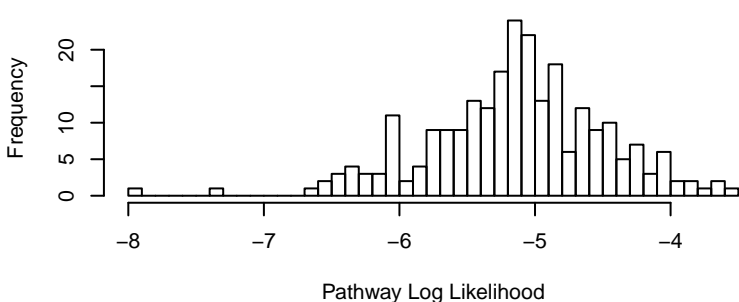
[767/3167] PWY-5488
4-nitrophenol degradation II
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

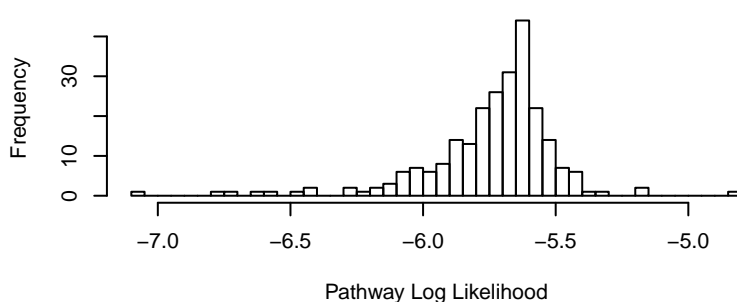
[768/3167] PWY-5489
methyl parathion degradation
(1 Reactions)

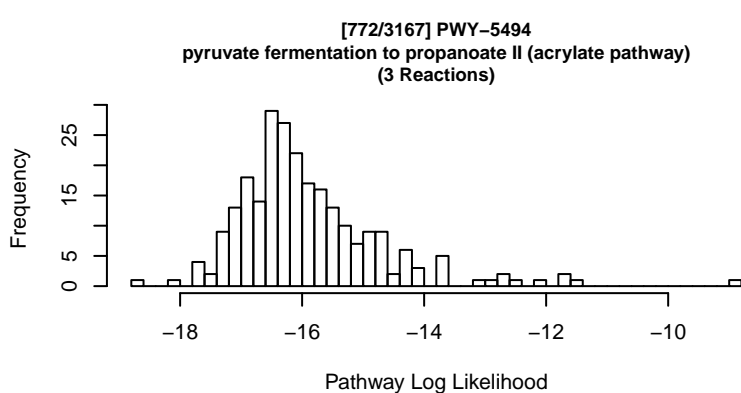
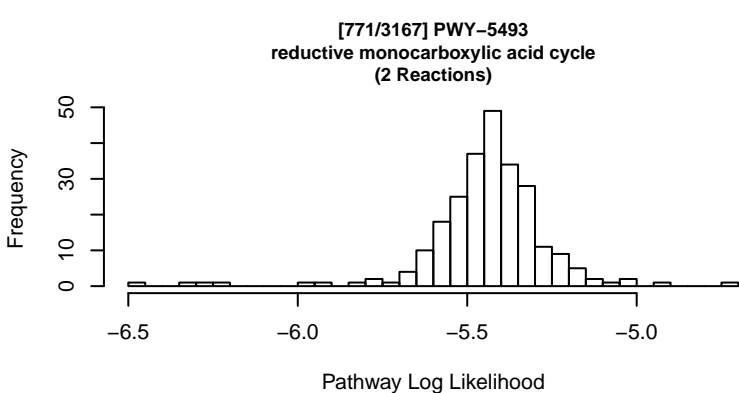


[769/3167] PWY-5490
paraoxon degradation
(1 Reactions)



[770/3167] PWY-5491
diethylphosphate degradation
(2 Reactions)





[773/3167] PWY-5497
purine nucleobases degradation II (anaerobic)
(17 Reactions)

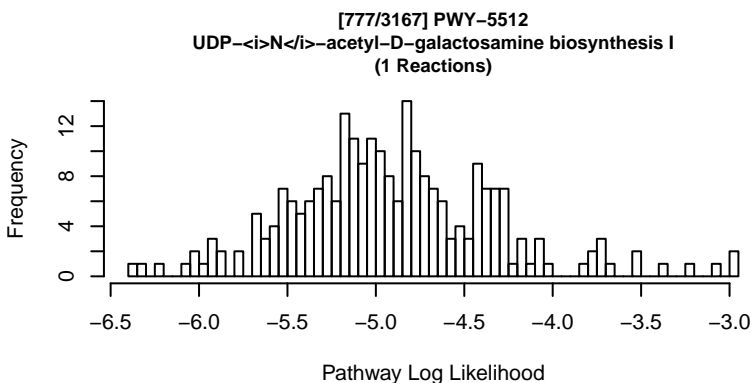
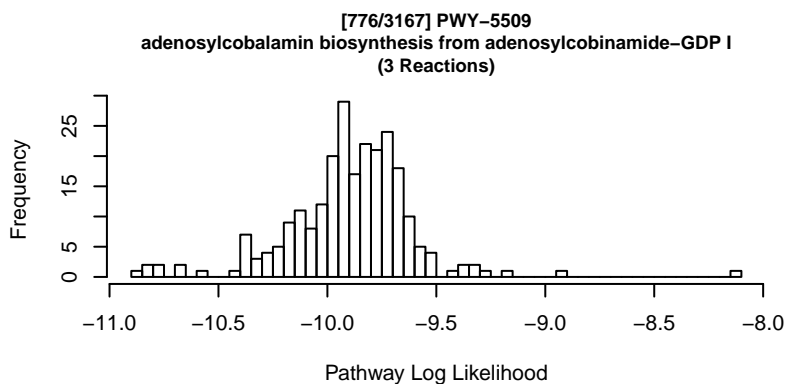
Missing 2 Reaction(s) from Pathway.

[774/3167] PWY-5499
vitamin B₆ degradation
(9 Reactions)

Missing 4 Reaction(s) from Pathway.

[775/3167] PWY-5506
methanol oxidation to formaldehyde IV
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



[778/3167] PWY-5514
UDP-N-acetyl-D-galactosamine biosynthesis II
(8 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[779/3167] PWY-5515
L-arabinose degradation II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[780/3167] PWY-5516
D-xylose degradation II
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[781/3167] PWY-5517
L-arabinose degradation III
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

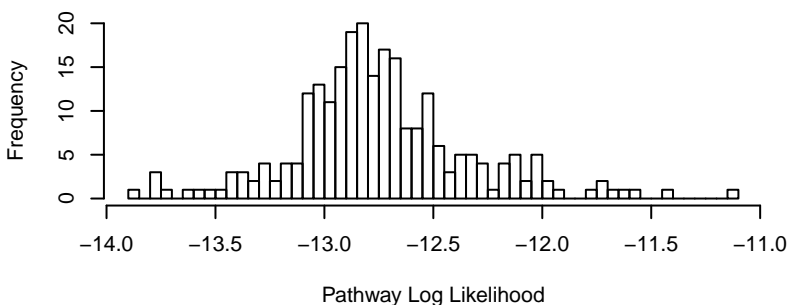
[782/3167] PWY-5519
D-arabinose degradation III
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[783/3167] PWY-5521
L-ascorbate biosynthesis III (D-sorbitol pathway)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[784/3167] PWY-5523
5,6-dimethylbenzimidazole biosynthesis I (aerobic)
(3 Reactions)



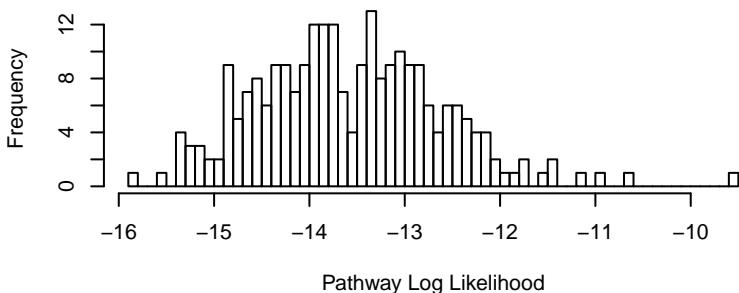
[785/3167] PWY-5525
D-glucuronate degradation I
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

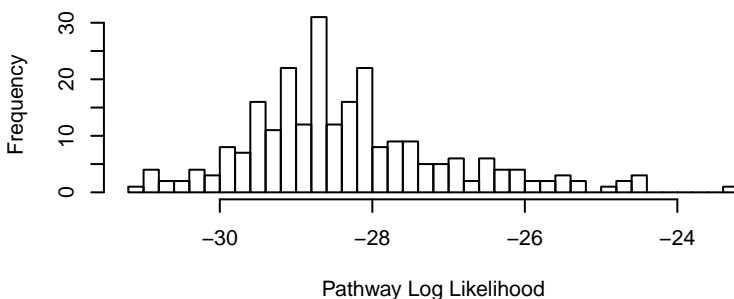
[786/3167] PWY-5526
bacteriochlorophyll *a* biosynthesis
(6 Reactions)

Missing 5 Reaction(s) from Pathway.

[787/3167] PWY-5530
sorbitol biosynthesis II
(3 Reactions)



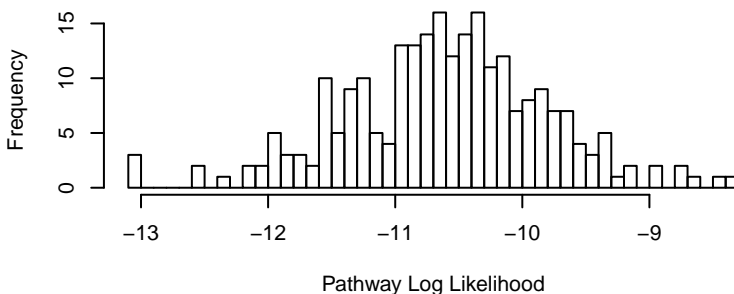
[788/3167] PWY-5531
3,8-divinyl-chlorophyllide *a* biosynthesis II (anaerobic)
(6 Reactions)



[789/3167] PWY-5532
nucleoside and nucleotide degradation (archaea)
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

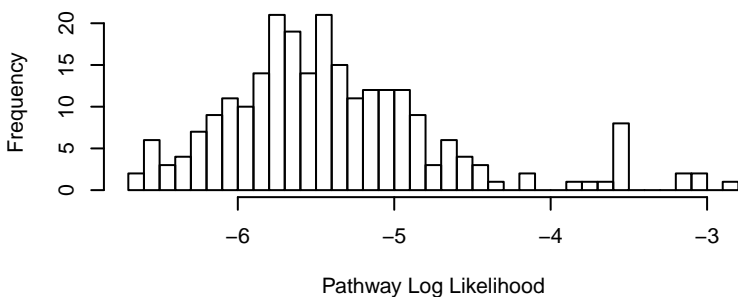
[790/3167] PWY-5533
acetone degradation II (to acetoacetate)
(2 Reactions)



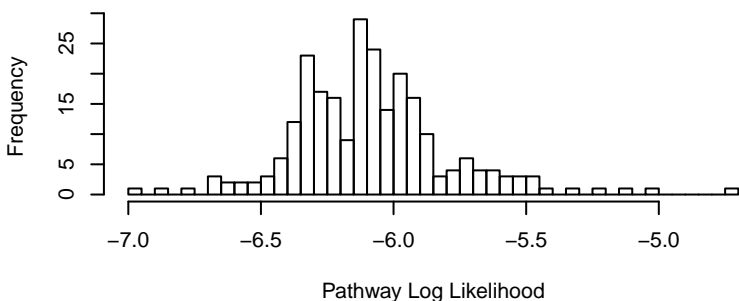
[791/3167] PWY-5534
propene degradation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[792/3167] PWY-5535
acetate and ATP formation from acetyl-CoA II
(1 Reactions)



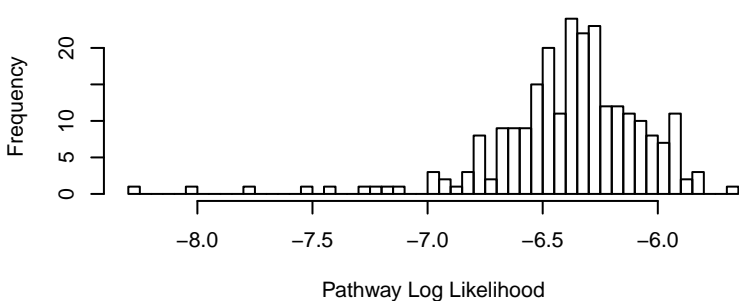
[793/3167] PWY-5536
acetate formation from acetyl-CoA (succinate)
(1 Reactions)



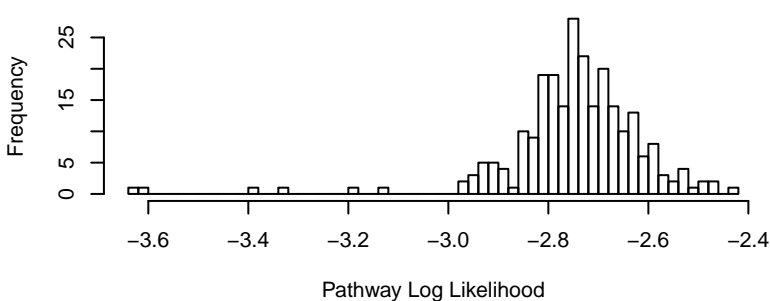
[794/3167] PWY-5537
pyruvate fermentation to acetate V
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

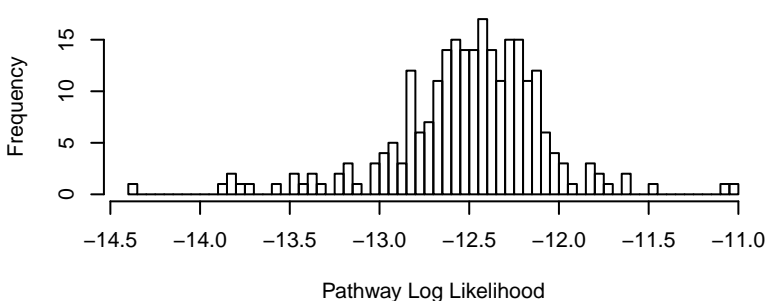
[795/3167] PWY-5538
pyruvate fermentation to acetate VI
(2 Reactions)



[796/3167] PWY-5600
pyruvate fermentation to acetate VII
(1 Reactions)



[797/3167] PWY-561
superpathway of glyoxylate cycle and fatty acid degradation
(4 Reactions)



[798/3167] PWY-5629
isopenicillin N biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[799/3167] PWY-5630
penicillin K biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[800/3167] PWY-5631
deacetylcephalosporin C biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[801/3167] PWY-5632
cephalosporin C biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[802/3167] PWY-5633
cephamycin C biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[803/3167] PWY-5636
2-nitrophenol degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[804/3167] PWY-5637
nitrobenzene degradation I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[805/3167] PWY-5640
nitrobenzene degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[806/3167] PWY-5641
2-nitrotoluene degradation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[807/3167] PWY-5642
2,4-dinitrotoluene degradation
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[808/3167] PWY-5643
2,6-dinitrotoluene degradation
(1 Reactions)

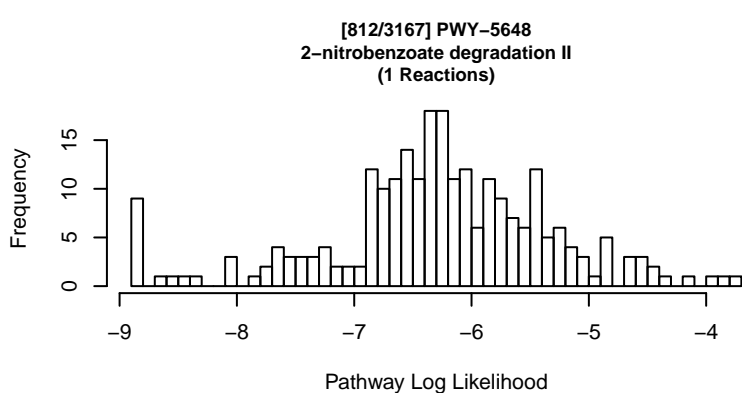
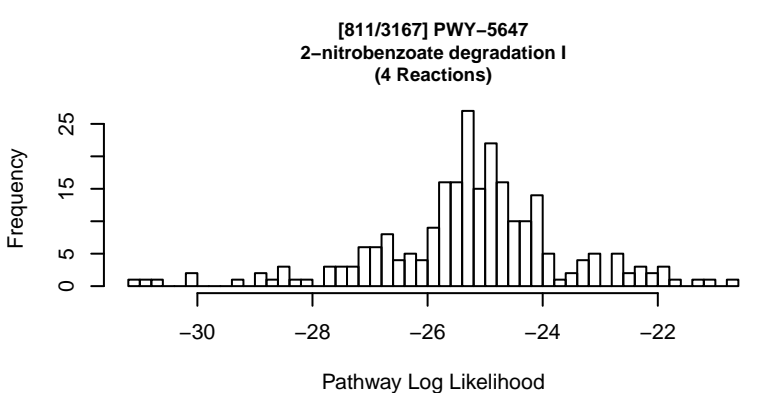
Missing ALL Reaction(s) from Pathway.

[809/3167] PWY-5644
4-nitrotoluene degradation II
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

[810/3167] PWY-5645
4-chloronitrobenzene degradation
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

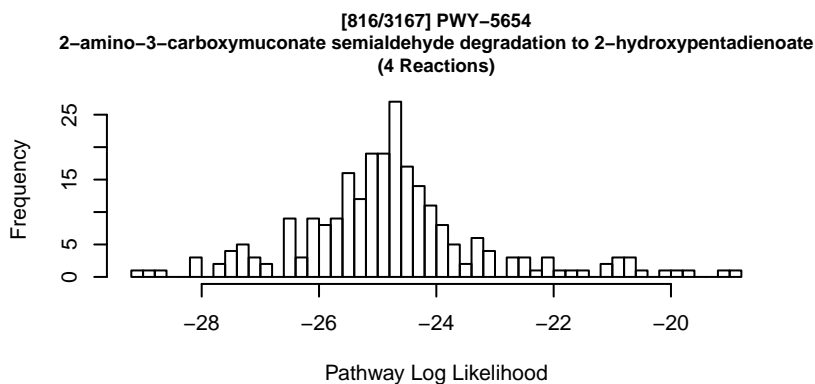
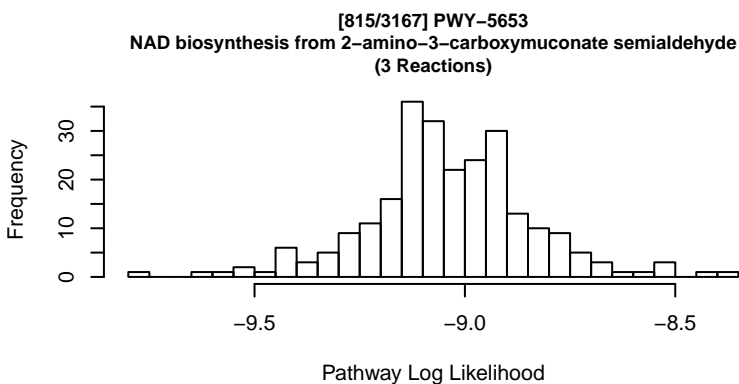


[813/3167] PWY-5651
L-tryptophan degradation to 2-amino-3-carboxymuconate semialdehyde
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[814/3167] PWY-5652
2-amino-3-carboxymuconate semialdehyde degradation to glutaryl-CoA
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

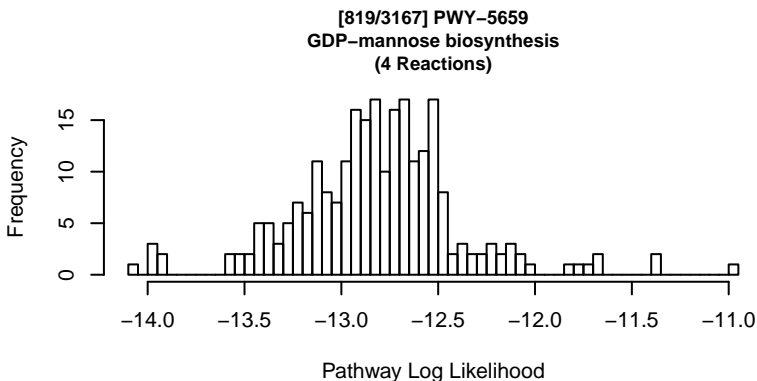


[817/3167] PWY-5656
mannosylglycerate biosynthesis I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[818/3167] PWY-5658
mannosylglycerate biosynthesis II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



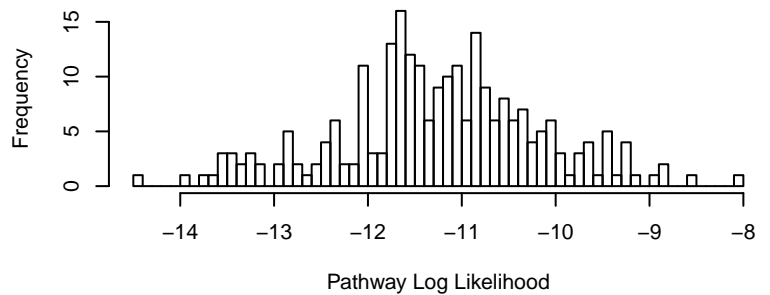
[820/3167] PWY-5660
taxol biosynthesis
(12 Reactions)

Missing 9 Reaction(s) from Pathway.

[821/3167] PWY-5661
GDP- α -D-glucose biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

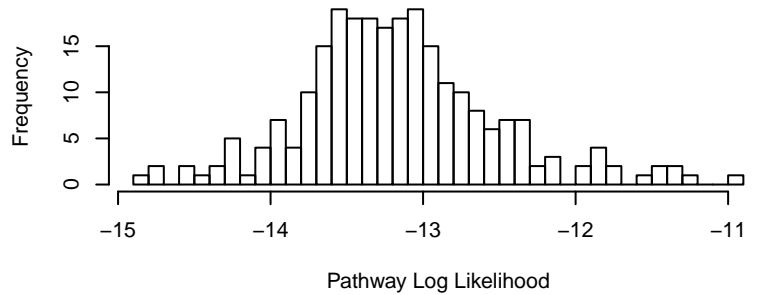
[822/3167] PWY-5662
glucosylglycerate biosynthesis I
(2 Reactions)



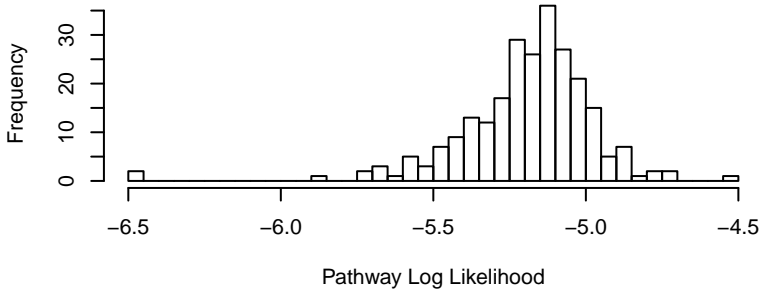
[823/3167] PWY-5663
erythro-tetrahydrobiopterin biosynthesis I
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

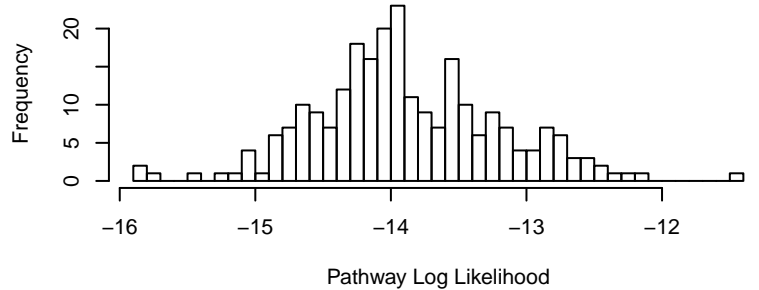
[824/3167] PWY-5665
vanillin biosynthesis I
(3 Reactions)



[825/3167] PWY-5666
 α -solanine/ α -chaconine biosynthesis
(2 Reactions)



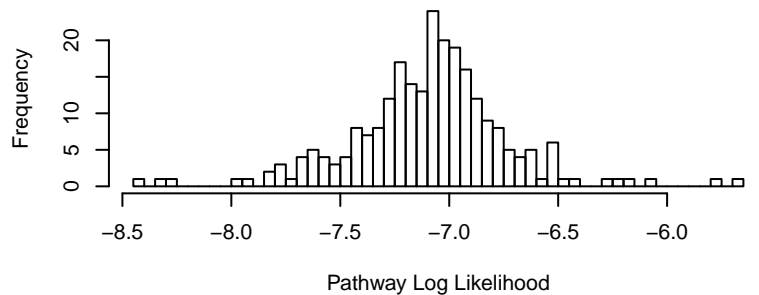
[826/3167] PWY-5667
CDP-diacylglycerol biosynthesis I
(4 Reactions)



[827/3167] PWY-5668
cardiolipin biosynthesis I
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[828/3167] PWY-5669
phosphatidylserine and phosphatidylethanolamine biosynthesis I
(2 Reactions)

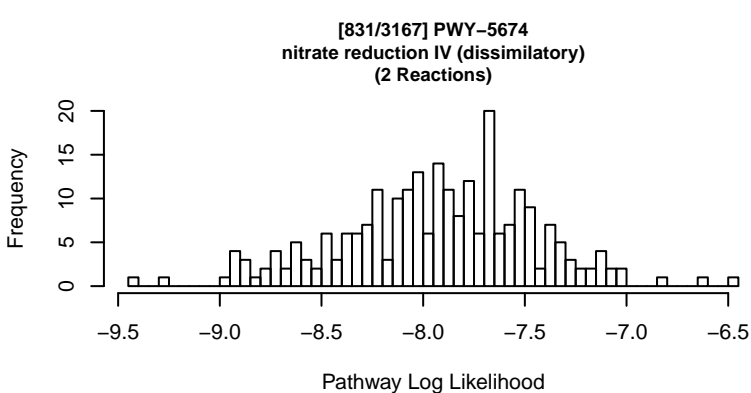


[829/3167] PWY-5670
epoxysqualene biosynthesis
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[830/3167] PWY-5672
ginsenosides biosynthesis
(13 Reactions)

Missing 12 Reaction(s) from Pathway.



[832/3167] PWY-5675
nitrate reduction V (assimilatory)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[833/3167] PWY-5676
acetyl-CoA fermentation to butanoate
(7 Reactions)

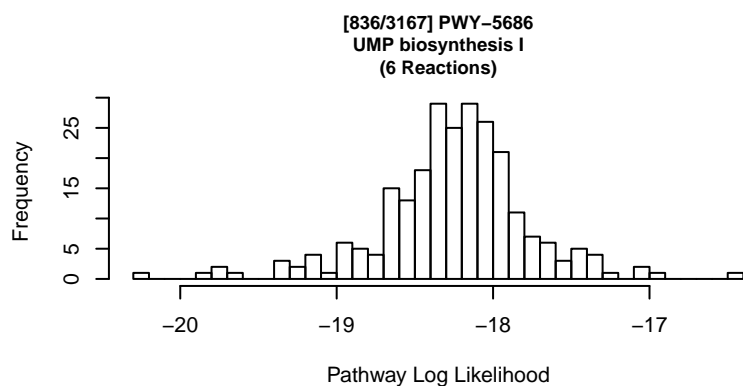
Missing 1 Reaction(s) from Pathway.

[834/3167] PWY-5677
succinate fermentation to butanoate
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

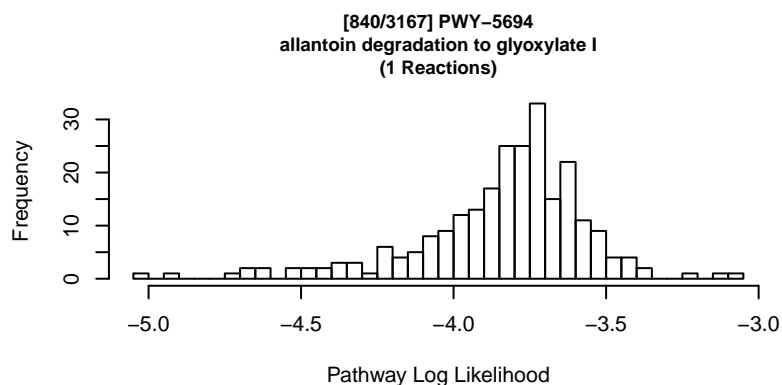
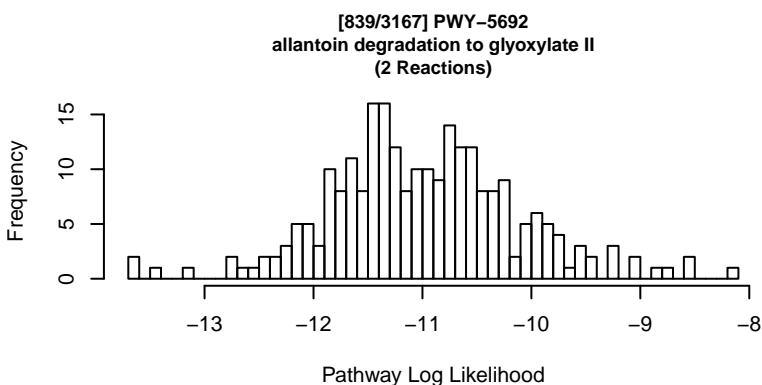
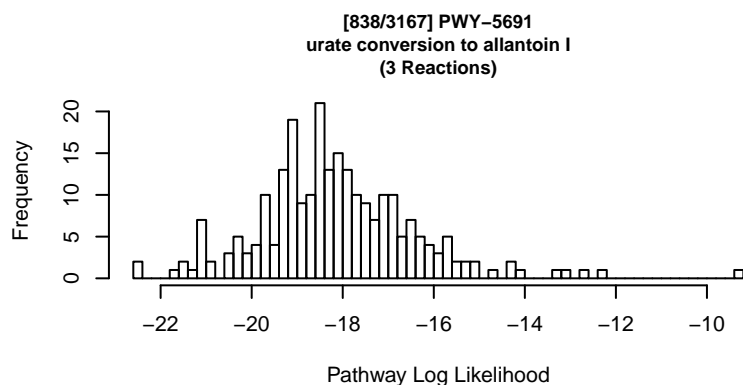
[835/3167] PWY-5679
clavulanate biosynthesis
(6 Reactions)

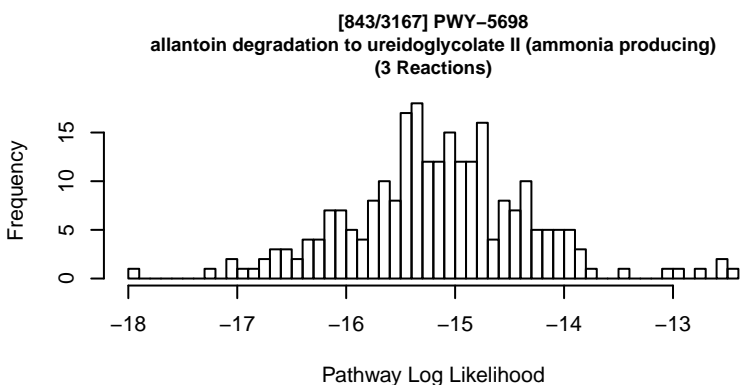
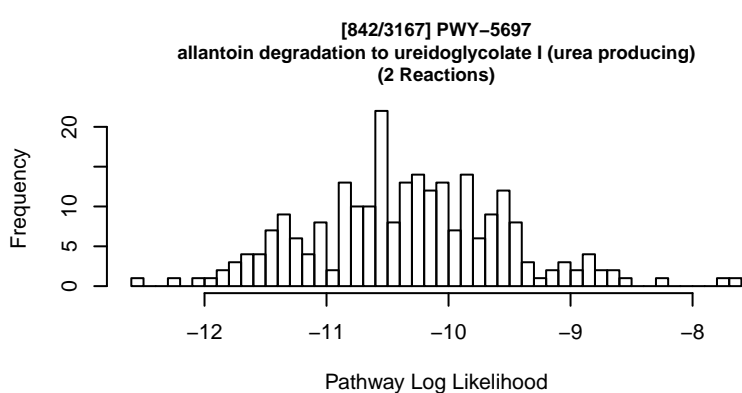
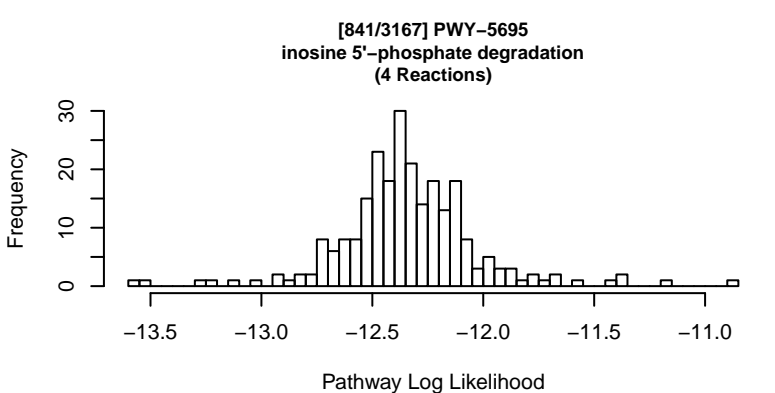
Missing 2 Reaction(s) from Pathway.



[837/3167] PWY-5690
TCA cycle II (plants and fungi)
(9 Reactions)

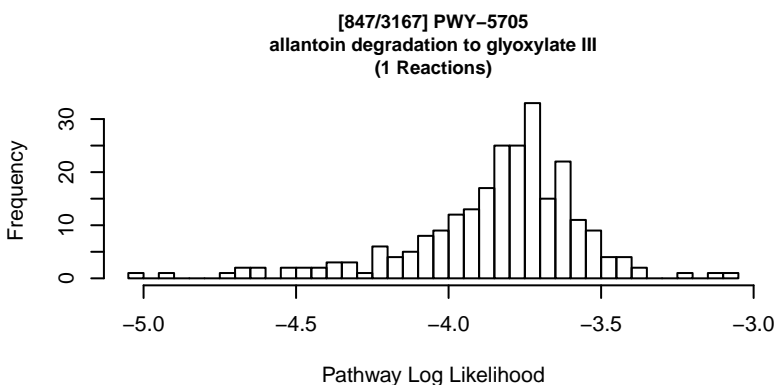
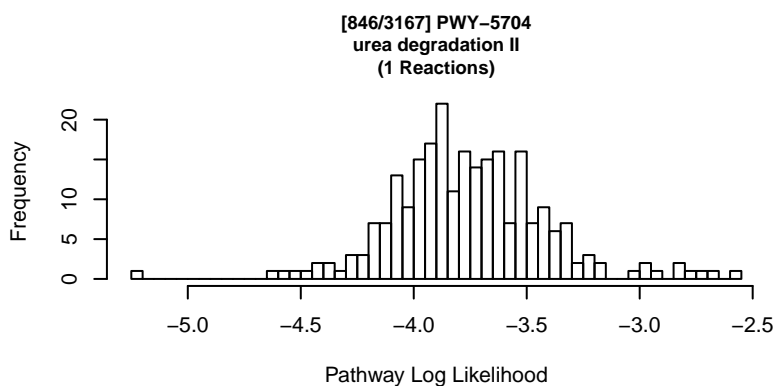
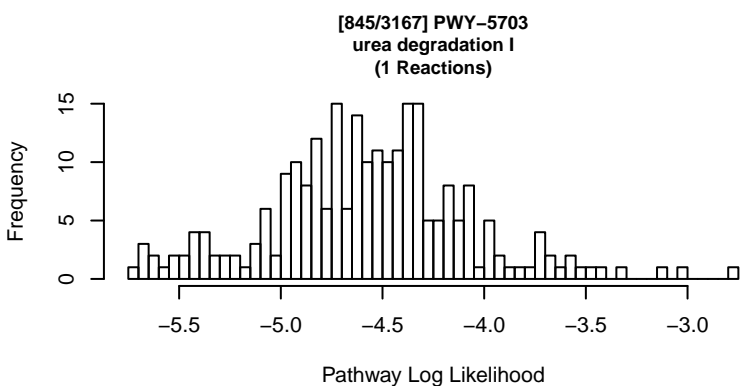
Missing 2 Reaction(s) from Pathway.





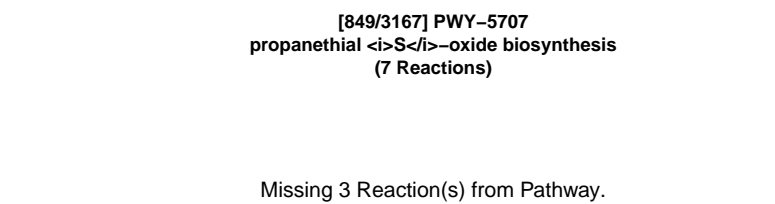
[844/3167] PWY-5701
shikonin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[848/3167] PWY-5706
alliin metabolism
(6 Reactions)

Missing 1 Reaction(s) from Pathway.



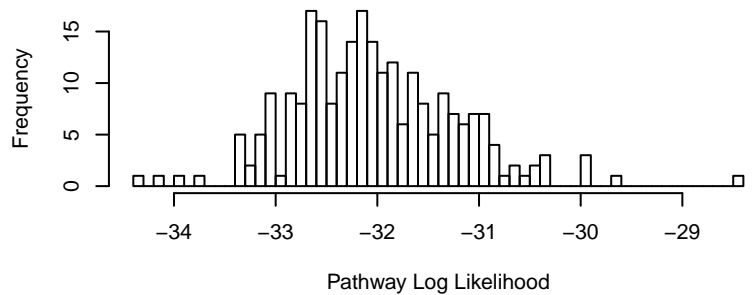
[850/3167] PWY-5708
ethiin metabolism
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[851/3167] PWY-5710
capsaicin biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

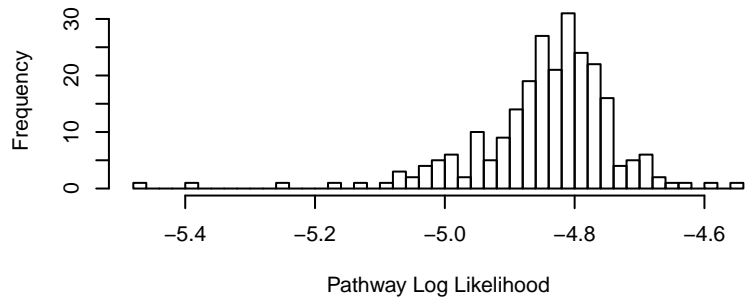
[852/3167] PWY-5723
Rubisco shunt
(9 Reactions)



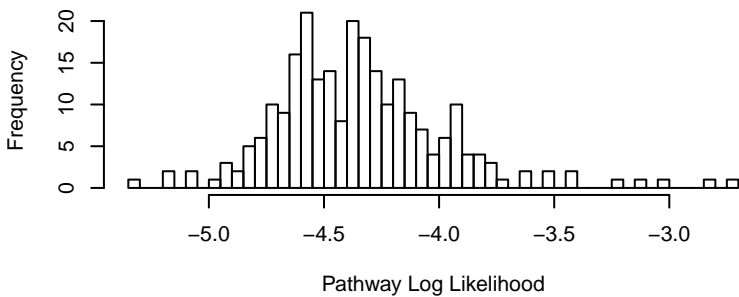
[853/3167] PWY-5725
farnesene biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[854/3167] PWY-5729
vestitol and sativan biosynthesis
(2 Reactions)



[855/3167] PWY-5731
atrazine degradation III
(1 Reactions)



[856/3167] PWY-5733
germacrene biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

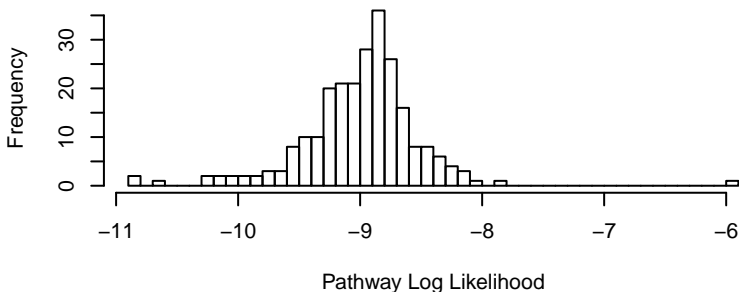
[857/3167] PWY-5737
(5*>R</i>)-carbapenem carboxylate biosynthesis*
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[858/3167] PWY-5738
GDP-6-deoxy-D-talose biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[859/3167] PWY-5739
GDP-D-perosamine biosynthesis
(2 Reactions)



[860/3167] PWY-5740
GDP-L-colitose biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[861/3167] PWY-5741
ethylmalonyl-CoA pathway
(11 Reactions)

Missing 3 Reaction(s) from Pathway.

[862/3167] PWY-5742
L-arginine degradation IX (arginine:pyruvate transaminase pathway)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[863/3167] PWY-5743
3-hydroxypropanoate cycle
(13 Reactions)

Missing 1 Reaction(s) from Pathway.

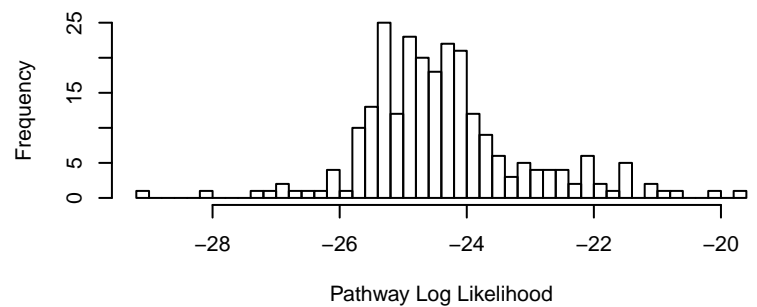
[864/3167] PWY-5744
glyoxylate assimilation
(13 Reactions)

Missing 3 Reaction(s) from Pathway.

[865/3167] PWY-5747
2-methylcitrate cycle II
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[866/3167] PWY-5748
γ-coniciene and coniine biosynthesis
(6 Reactions)



[867/3167] PWY-5749
itaconate degradation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[868/3167] PWY-5750
itaconate biosynthesis I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[869/3167] PWY-5751
phenylethanol biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

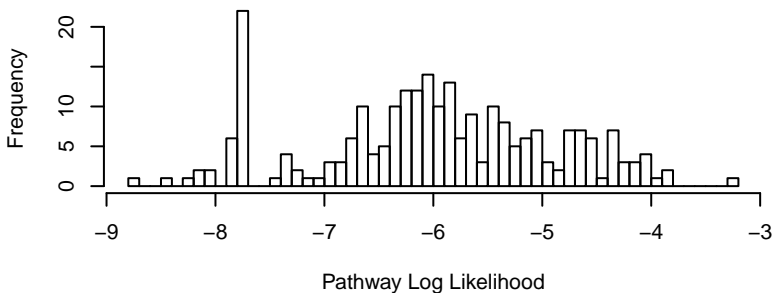
[870/3167] PWY-5752
piperine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

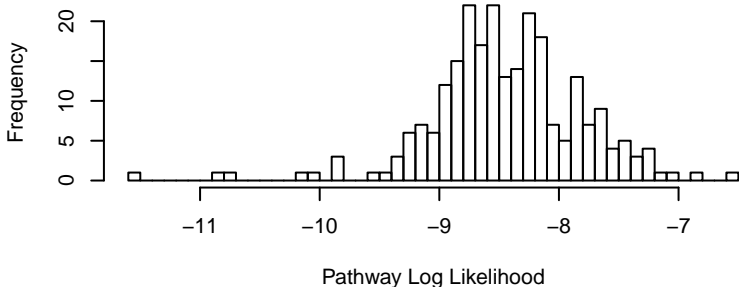
[871/3167] PWY-5754
4-hydroxybenzoate biosynthesis I (eukaryotes)
(8 Reactions)

Missing 3 Reaction(s) from Pathway.

[872/3167] PWY-5755
4-hydroxybenzoate biosynthesis II (bacteria)
(1 Reactions)



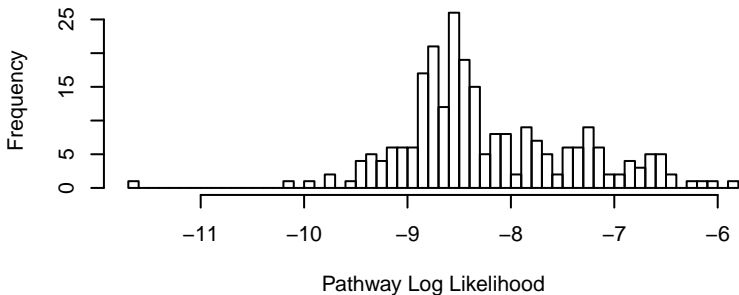
[873/3167] PWY-5756
saponin biosynthesis II
(2 Reactions)



[874/3167] PWY-5757
fosfomycin biosynthesis
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

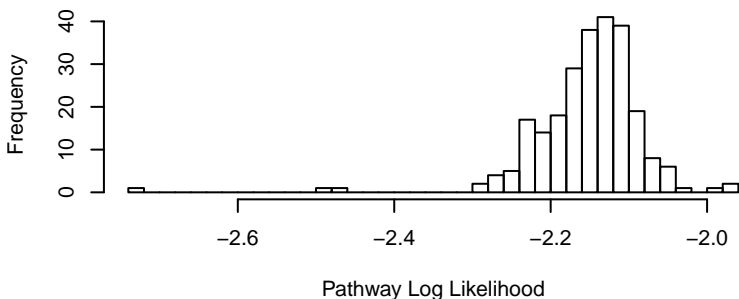
[875/3167] PWY-5759
saponin biosynthesis III
(2 Reactions)



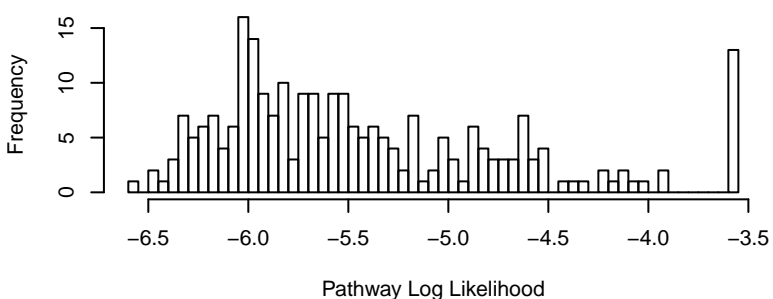
[876/3167] PWY-5760
β-alanine biosynthesis IV
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

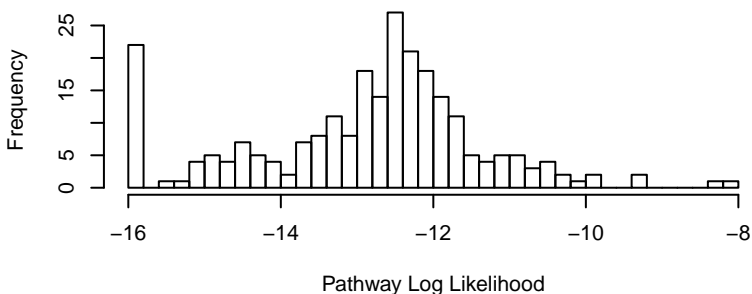
[877/3167] PWY-5765
1,3,5-trimethoxybenzene biosynthesis
(1 Reactions)



[878/3167] PWY-5766
L-glutamate degradation X
(1 Reactions)



[879/3167] PWY-5768
pyruvate fermentation to acetate VIII
(2 Reactions)



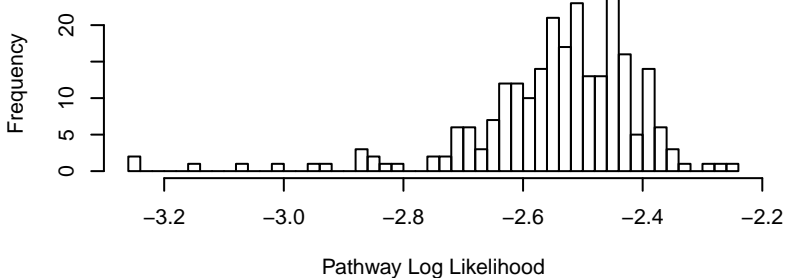
[880/3167] PWY-5770
phenazine-1-carboxylate biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

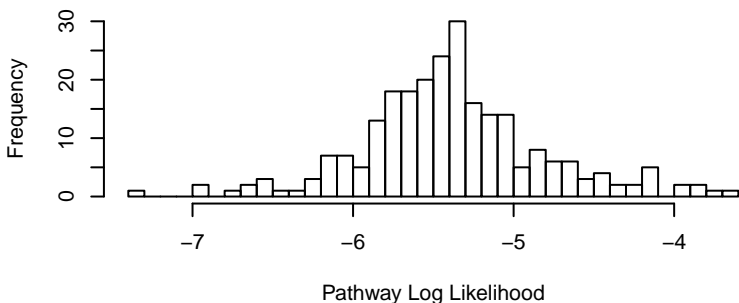
[881/3167] PWY-5773
gossypol biosynthesis
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

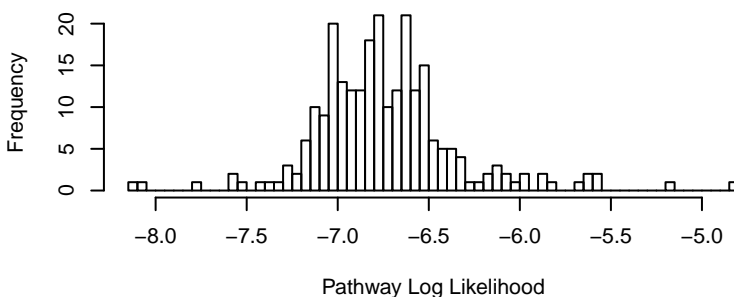
[882/3167] PWY-5774
saponin biosynthesis IV
(1 Reactions)



[883/3167] PWY-5775
rotenoid biosynthesis I
(1 Reactions)



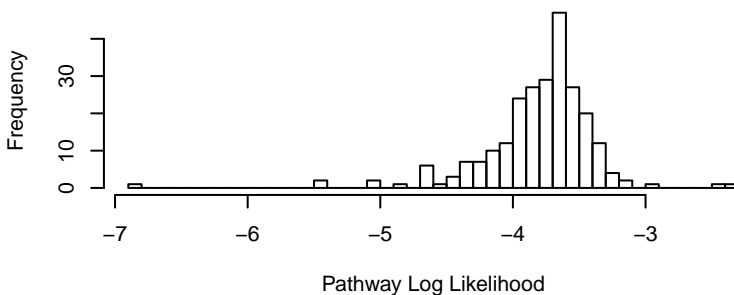
[884/3167] PWY-5780
hypericin biosynthesis
(2 Reactions)



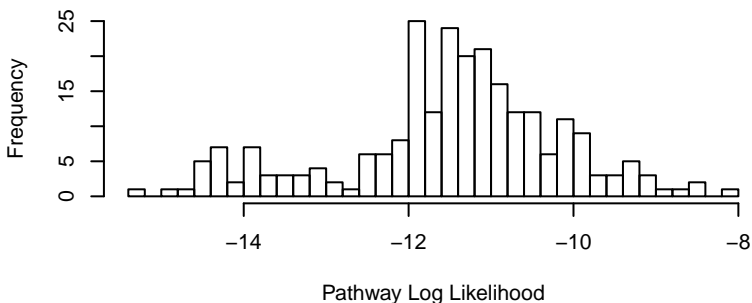
[885/3167] PWY-5782
2-keto-L-gulonate biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

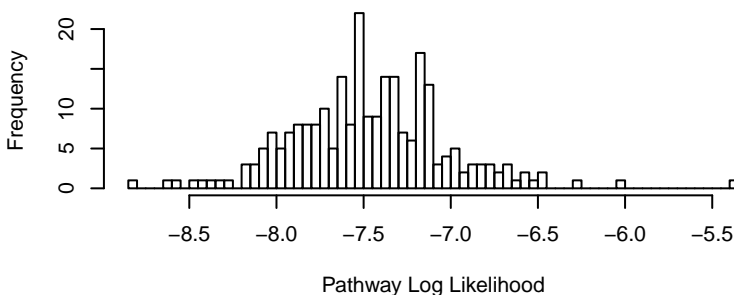
[886/3167] PWY-5783
octaprenyl diphosphate biosynthesis
(1 Reactions)



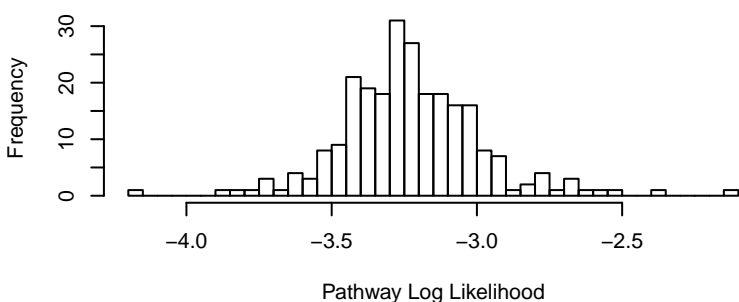
[887/3167] PWY-5784
indole-3-acetate inactivation VIII
(3 Reactions)



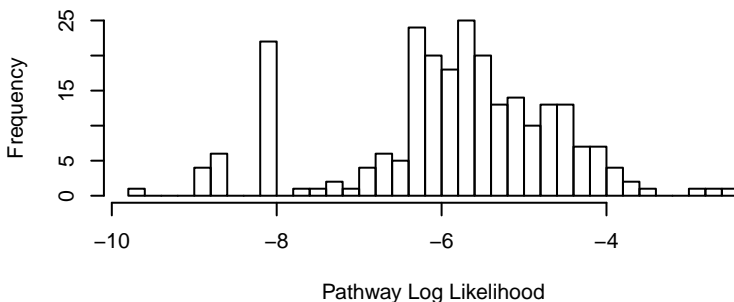
[888/3167] PWY-5785
di-<i>trans</i>,poly-<i>cis</i>-undecaprenyl phosphate biosynthesis
(2 Reactions)



[889/3167] PWY-5787
oligomeric urushiol biosynthesis
(1 Reactions)



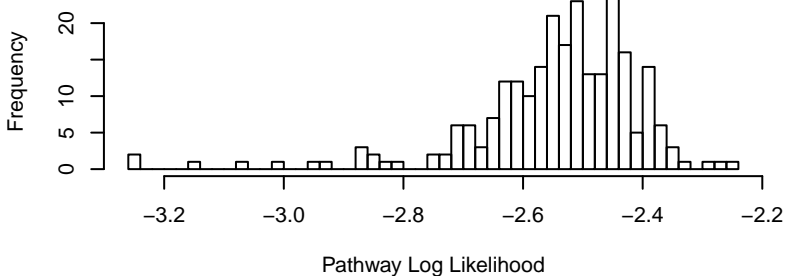
[890/3167] PWY-5788
indole-3-acetate inactivation V
(1 Reactions)



[891/3167] PWY-5789
3-hydroxypropanoate/4-hydroxybutanate cycle
(19 Reactions)

Missing 2 Reaction(s) from Pathway.

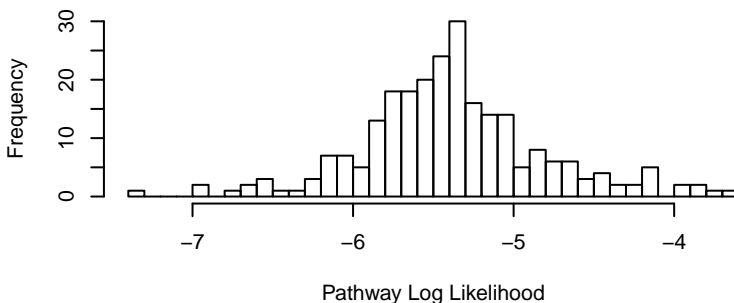
[892/3167] PWY-5793
maysin biosynthesis
(1 Reactions)



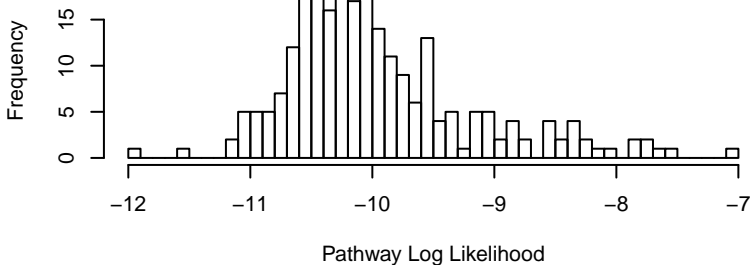
[893/3167] PWY-5794
malonate degradation I (biotin-independent)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

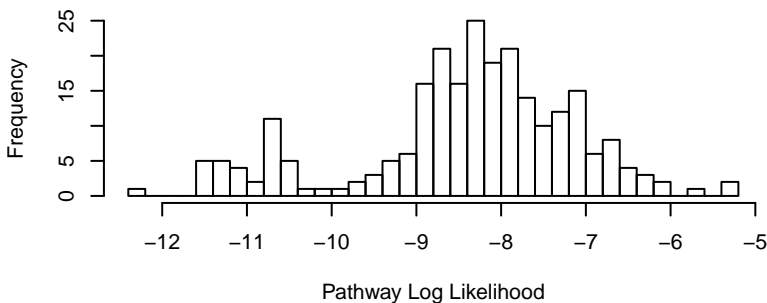
[894/3167] PWY-5795
juglone biosynthesis
(1 Reactions)



[895/3167] PWY-5796
malonate decarboxylase activation
(2 Reactions)



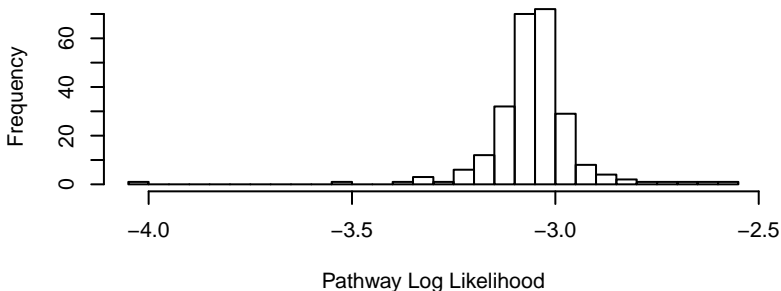
[896/3167] PWY-5797
indole-3-acetate inactivation VI
(2 Reactions)



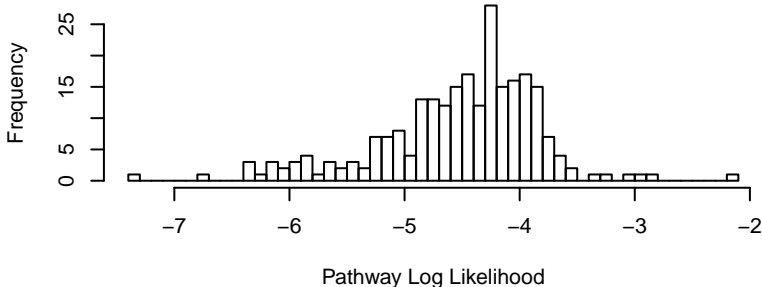
[897/3167] PWY-5800
xylan biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[898/3167] PWY-5802
alizarin biosynthesis
(1 Reactions)

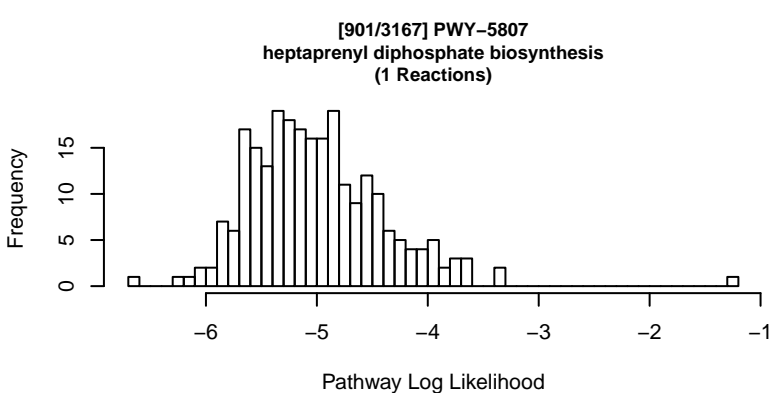


[899/3167] PWY-5805
nonaprenyl diphosphate biosynthesis I
(1 Reactions)



[900/3167] PWY-5806
all-*trans*-decaprenyl diphosphate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

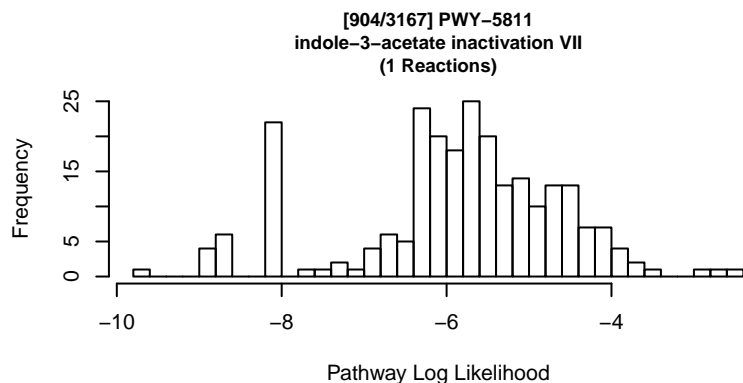


[902/3167] PWY-5808
hyperforin and adhyperforin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[903/3167] PWY-5811
indole-3-acetate biosynthesis II
(10 Reactions)

Missing 5 Reaction(s) from Pathway.



[905/3167] PWY-5813
bornyl diphosphate biosynthesis
(1 Reactions)

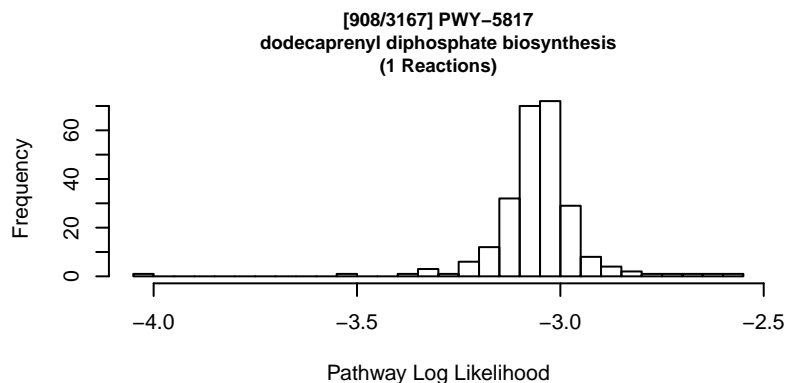
Missing ALL Reaction(s) from Pathway.

[906/3167] PWY-5815
rubber biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

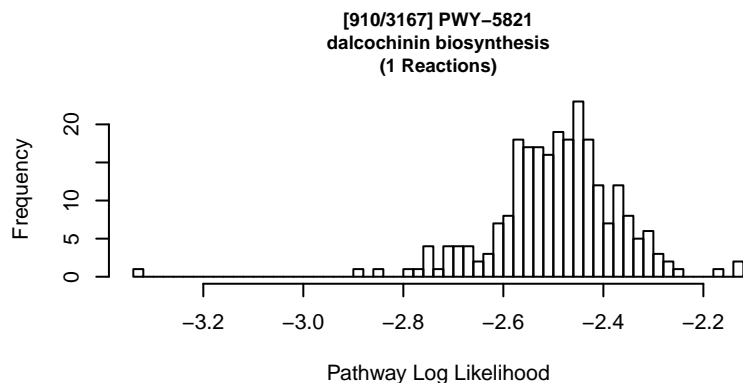
[907/3167] PWY-5816
all <i>trans</i> undecaprenyl diphosphate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[909/3167] PWY-5818
validamycin biosynthesis
(11 Reactions)

Missing 5 Reaction(s) from Pathway.



[911/3167] PWY-5822
trichloroethene degradation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[912/3167] PWY-5825
dalpatein and dalnigrein biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[913/3167] PWY-5826
hypoglycin biosynthesis
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[914/3167] PWY-5828
lacinilene C biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

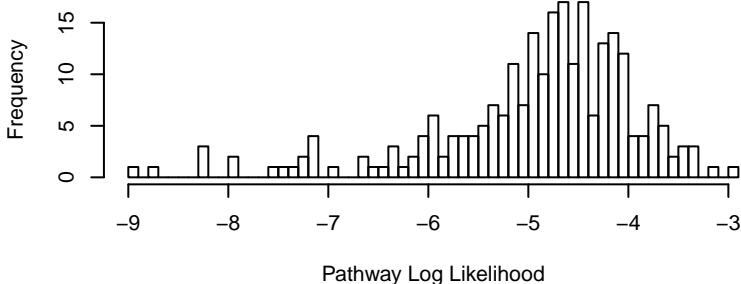
[915/3167] PWY-5829
geraniol and geranial biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[916/3167] PWY-5830
CDP-ascarylose biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

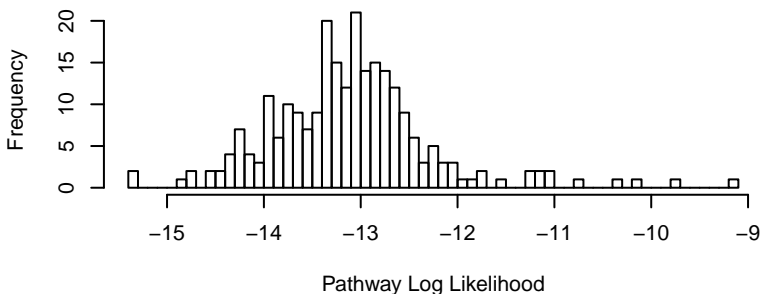
[917/3167] PWY-5831
CDP-abequose biosynthesis
(1 Reactions)



[918/3167] PWY-5832
CDP-paratose biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[919/3167] PWY-5833
CDP-4-dehydro-3,6-dideoxy-D-glucose biosynthesis
(3 Reactions)



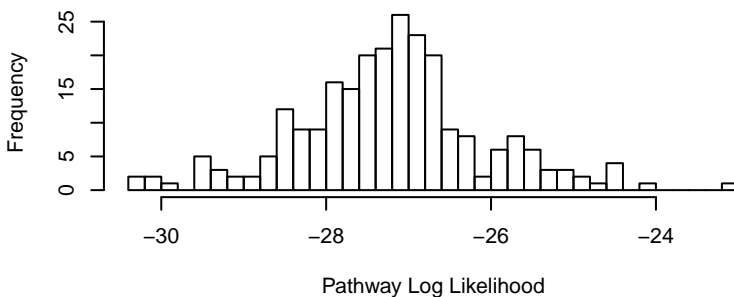
[920/3167] PWY-5834
CDP-tyvelose biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

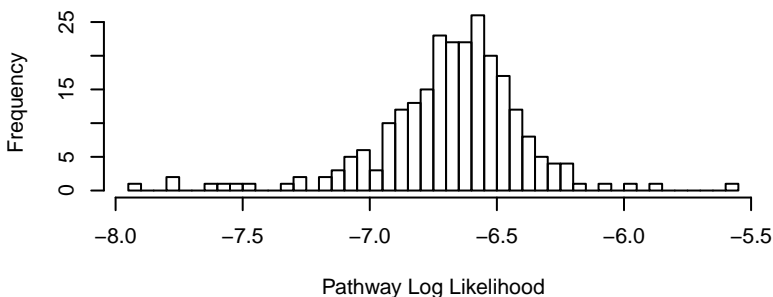
[921/3167] PWY-5835
geranyl acetate biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[922/3167] PWY-5837
2-carboxy-1,4-naphthoquinol biosynthesis
(7 Reactions)



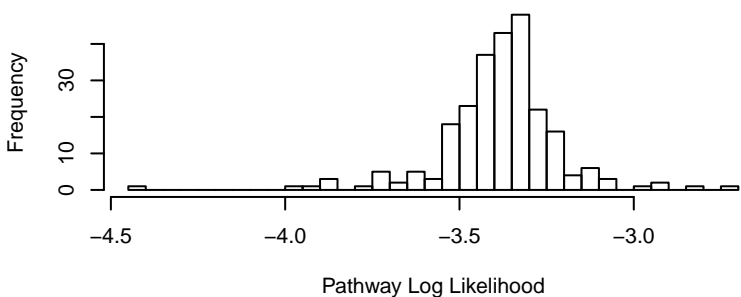
[923/3167] PWY-5839
menaquinol-7 biosynthesis
(2 Reactions)



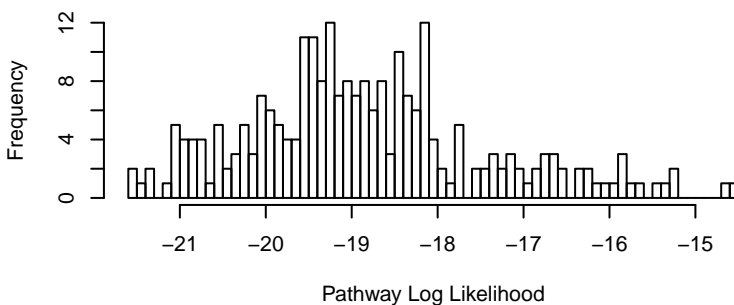
[924/3167] PWY-5843
cocaine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

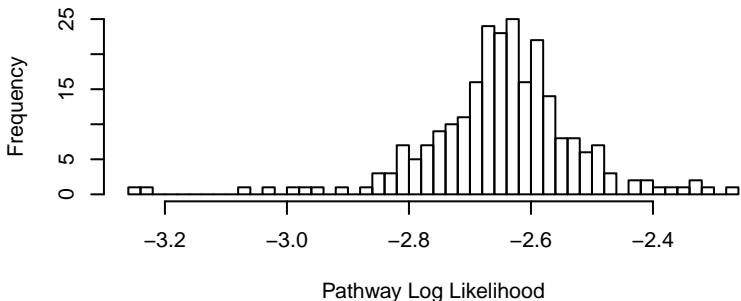
[925/3167] PWY-5844
menaquinol-9 biosynthesis
(1 Reactions)



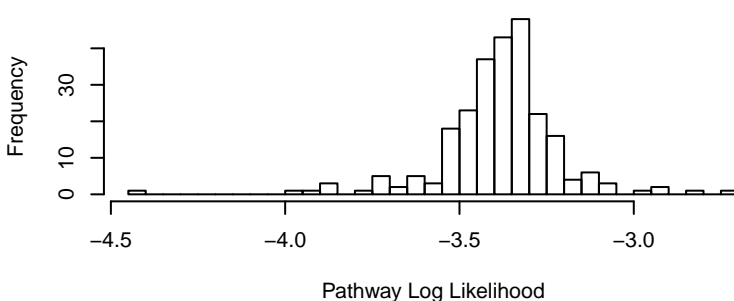
[926/3167] PWY-5846
colchicine biosynthesis
(5 Reactions)



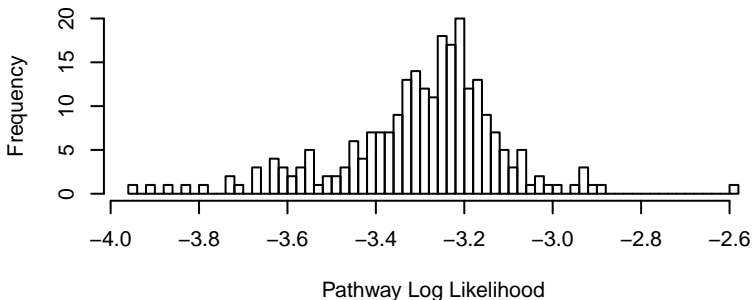
[927/3167] PWY-5848
cinchona alkaloids biosynthesis
(1 Reactions)



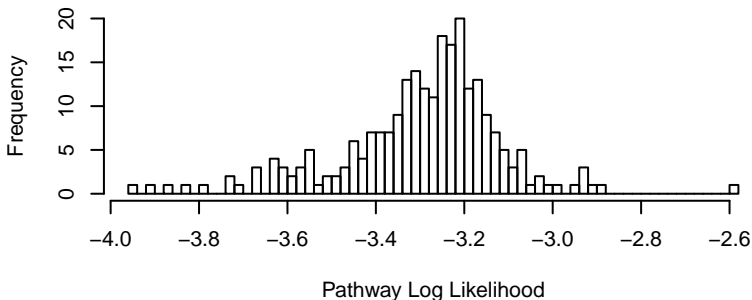
[928/3167] PWY-5849
menaquinol-6 biosynthesis
(1 Reactions)

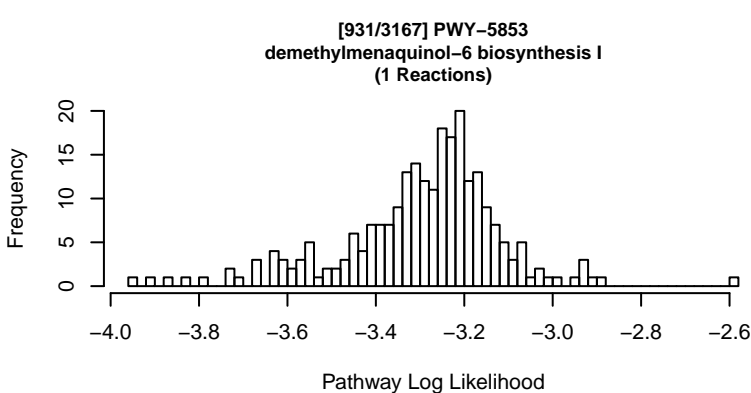


[929/3167] PWY-5851
demethylmenaquinol-9 biosynthesis
(1 Reactions)



[930/3167] PWY-5852
demethylmenaquinol-8 biosynthesis I
(1 Reactions)





[932/3167] PWY-5855
ubiquinol-7 biosynthesis (early decarboxylation)
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

[933/3167] PWY-5856
ubiquinol-9 biosynthesis (early decarboxylation)
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

[934/3167] PWY-5857
ubiquinol-10 biosynthesis (early decarboxylation)
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

[935/3167] PWY-5859
eugenol and isoeugenol biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[936/3167] PWY-5867
anethole biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[937/3167] PWY-5870
ubiquinol-8 biosynthesis (late decarboxylation)
(9 Reactions)

Missing 2 Reaction(s) from Pathway.

[938/3167] PWY-5871
ubiquinol-9 biosynthesis (late decarboxylation)
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

[939/3167] PWY-5872
ubiquinol-10 biosynthesis (late decarboxylation)
(9 Reactions)

Missing 3 Reaction(s) from Pathway.

[940/3167] PWY-5873
ubiquinol-7 biosynthesis (late decarboxylation)
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

[941/3167] PWY-5874
heme degradation I
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[942/3167] PWY-5875
staphyloxanthin biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[943/3167] PWY-5876
magnoflorine biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[944/3167] PWY-5877
beta-carboline biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[945/3167] PWY-5882
epoxypseudoisoeugenol-2-methylbutanoate biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[946/3167] PWY-5883
ephedrine biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[947/3167] PWY-5884
wax esters biosynthesis I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[948/3167] PWY-5885
wax esters biosynthesis II
(3 Reactions)

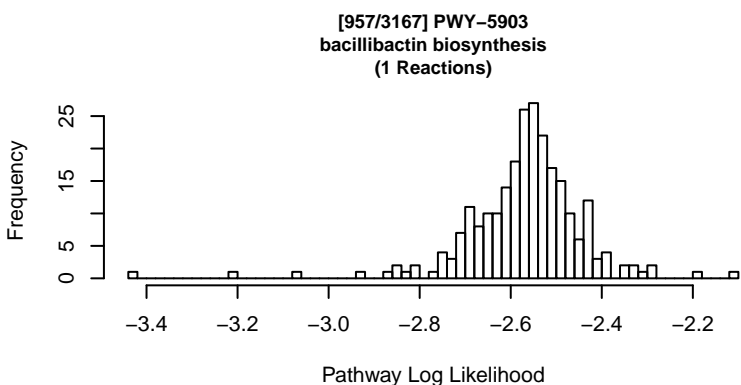
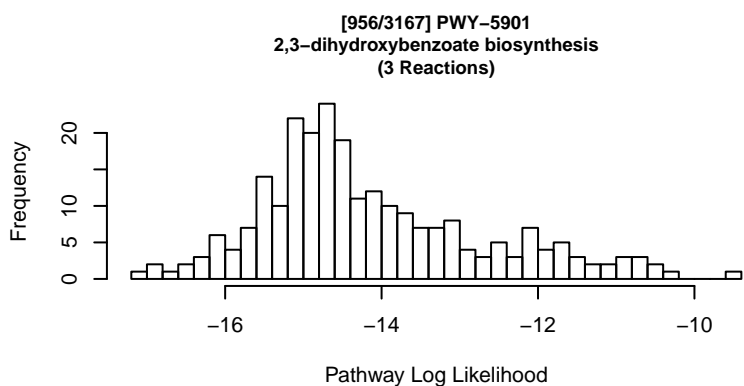
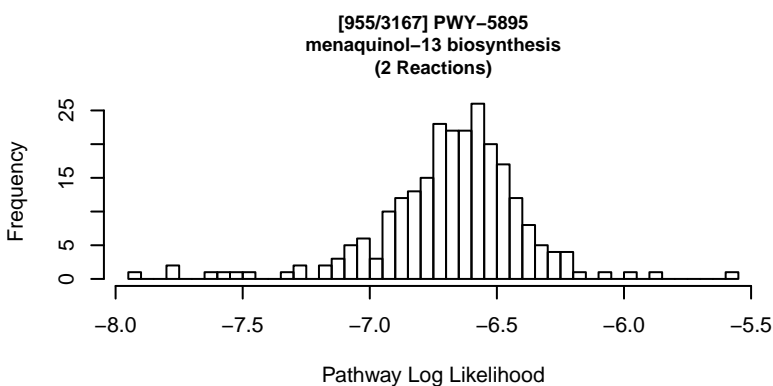
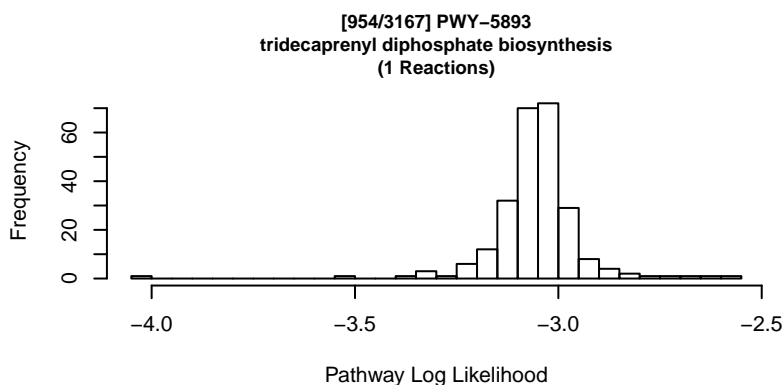
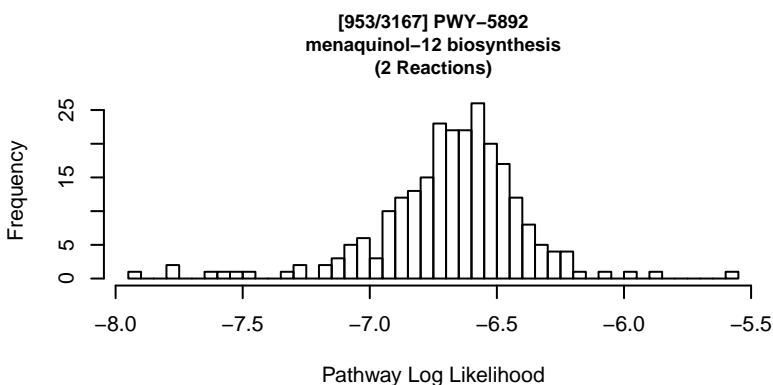
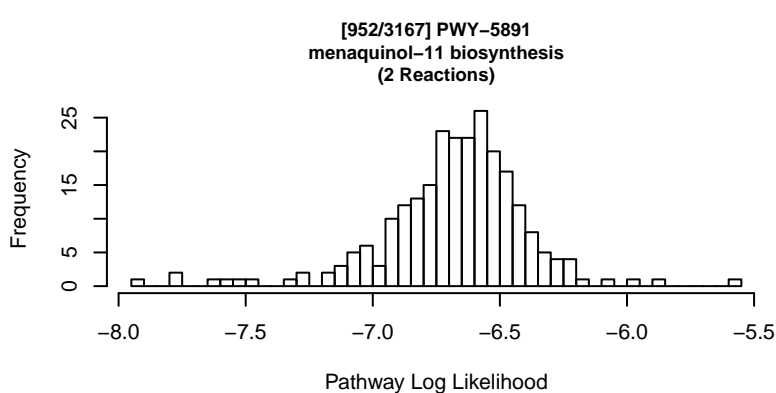
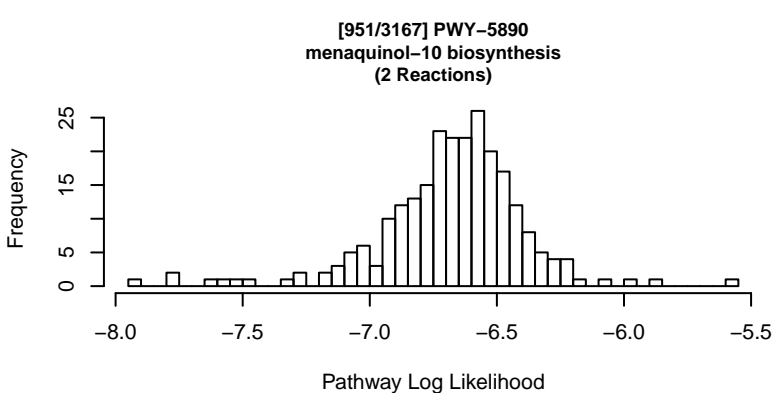
Missing 1 Reaction(s) from Pathway.

[949/3167] PWY-5886
3-(4-hydroxyphenyl)pyruvate biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

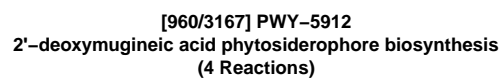
[950/3167] PWY-5887
albaflavone biosynthesis
(1 Reactions)

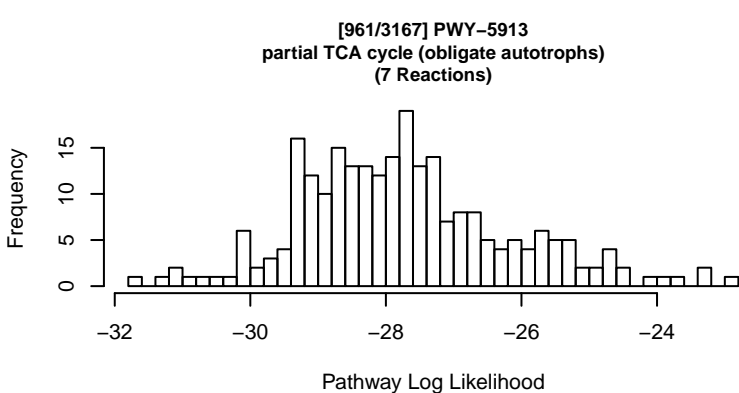
Missing ALL Reaction(s) from Pathway.



[958/3167] PWY-5905
hypusine biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway



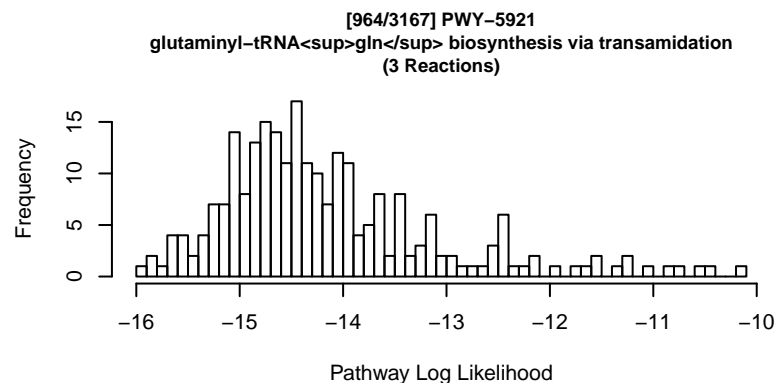


[962/3167] PWY-5915
phycoerythrobilin biosynthesis I
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[963/3167] PWY-5917
phycocyanobilin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.



[965/3167] PWY-5922
(4*R*)-carveol and (4*R*)-dihydrocarveol degradation
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[966/3167] PWY-5923
limonene degradation I (D-limonene)
(5 Reactions)

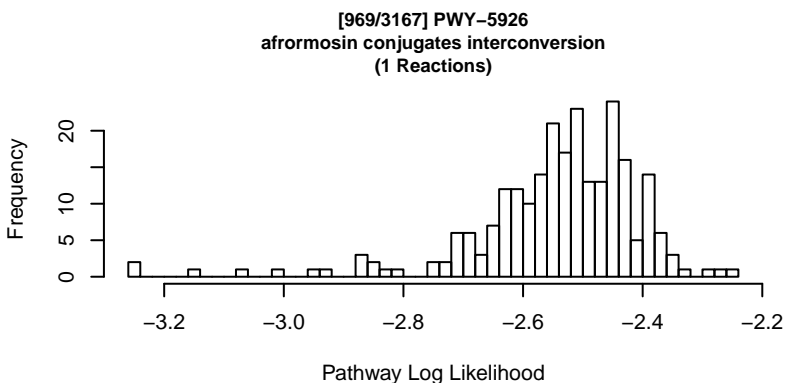
Missing 2 Reaction(s) from Pathway.

[967/3167] PWY-5924
limonene degradation II (L-limonene)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[968/3167] PWY-5925
hydroxylated mugineic acid phytosiderophore biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[970/3167] PWY-5927
(4*S*)-carveol and (4*S*)-dihydrocarveol degradation
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[971/3167] PWY-5928
(4<i>R</i>)-carvone biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[972/3167] PWY-5929
puromycin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[973/3167] PWY-5930
terpentecin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[974/3167] PWY-5934
iron reduction and absorption
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

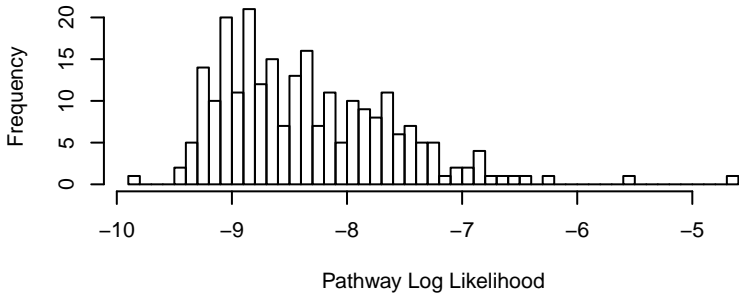
[975/3167] PWY-5935
1-tuberculosinyladenosine biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

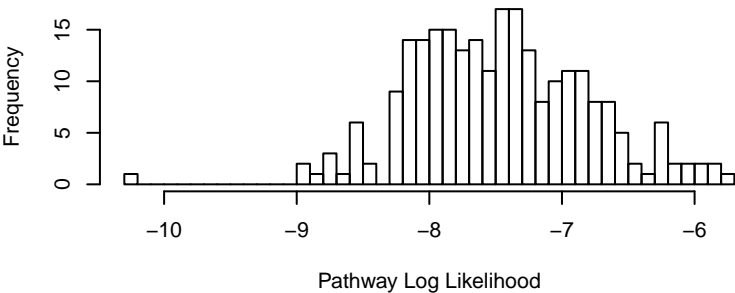
[976/3167] PWY-5936
xyloglucan biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[977/3167] PWY-5938
pyruvate fermentation to (<i>R</i>)-acetoin I
(2 Reactions)



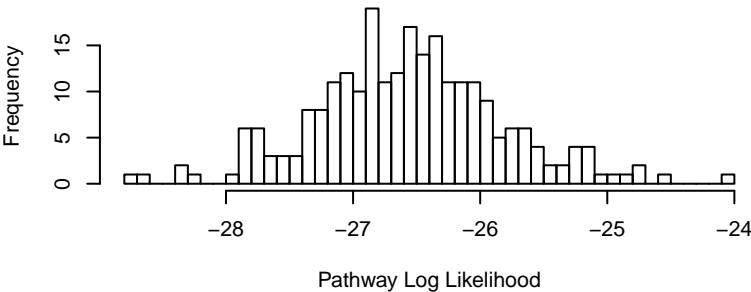
[978/3167] PWY-5939
pyruvate fermentation to (<i>R</i>)-acetoin II
(2 Reactions)



[979/3167] PWY-5940
streptomycin biosynthesis
(11 Reactions)

Missing 5 Reaction(s) from Pathway.

[980/3167] PWY-5941
glycogen degradation II
(7 Reactions)



[981/3167] PWY-5943
β-carotene biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[982/3167] PWY-5946
α-carotene biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

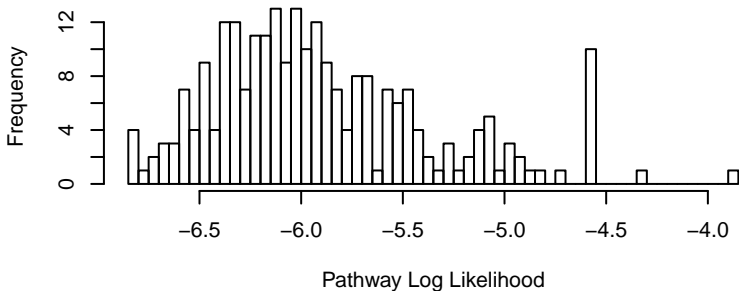
[983/3167] PWY-5947
lutein biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[984/3167] PWY-5950
geosmin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[985/3167] PWY-5951
(*<i>R,R</i>*)-butanediol biosynthesis
(1 Reactions)



[986/3167] PWY-5954
(1'*<i>S</i>*,5'*<i>S</i>*)-averufin biosynthesis
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

[987/3167] PWY-5955
versicolorin B biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[988/3167] PWY-5956
sterigmatocystin biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[989/3167] PWY-5957
L-nicotianamine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[990/3167] PWY-5958
acridone alkaloid biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[991/3167] PWY-5959
aflatoxins B₁ and G₁ biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

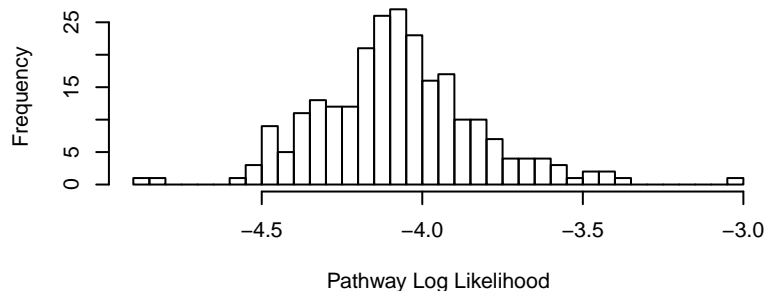
[992/3167] PWY-5960
aflatoxins B₂ and G₂ biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

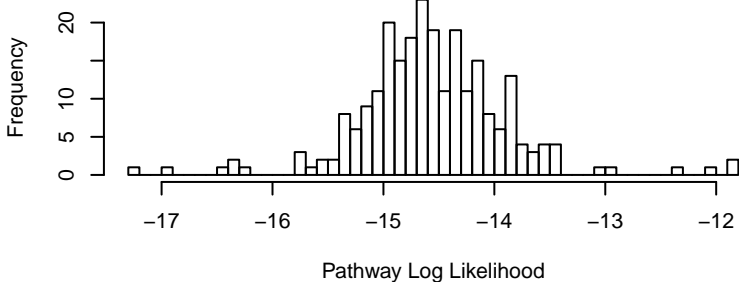
[993/3167] PWY-5963
molybdenum cofactor sulfurylation (eukaryotes)
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[994/3167] PWY-5964
guanylyl molybdenum cofactor biosynthesis
(1 Reactions)



[995/3167] PWY-5966-1
fatty acid biosynthesis initiation (type I)
(3 Reactions)



[996/3167] PWY-5967
lupinate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[997/3167] PWY-5968
cinnamate esters biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

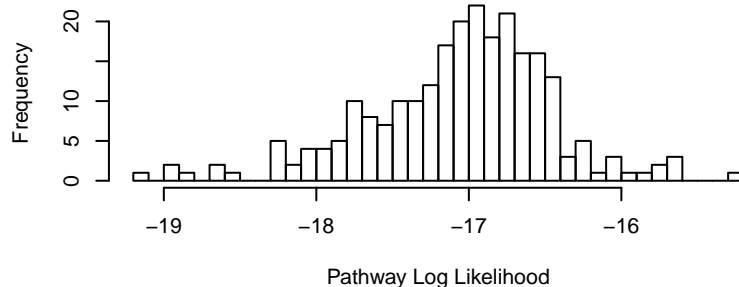
[998/3167] PWY-5971
palmitate biosynthesis II (type II fatty acid synthase)
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[999/3167] PWY-5972
stearate biosynthesis I (animals)
(6 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1000/3167] PWY-5973
cis-vaccenate biosynthesis
(5 Reactions)



[1001/3167] PWY-5975
furaneol and mesifurane biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1002/3167] PWY-5976
dhurrin degradation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1003/3167] PWY-5978
kanosamine biosynthesis I
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

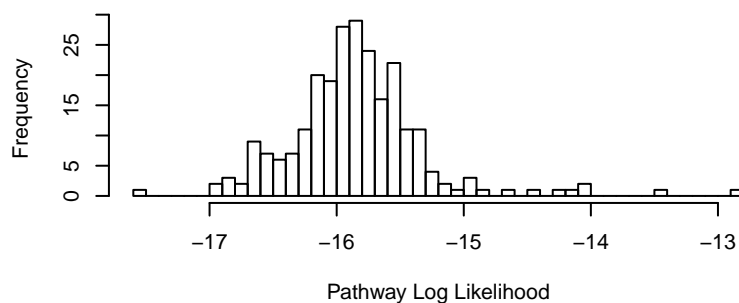
[1004/3167] PWY-5979
3-amino-5-hydroxybenzoate biosynthesis
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[1005/3167] PWY-5980
xylogalacturonan biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1006/3167] PWY-5981
CDP-diacylglycerol biosynthesis III
(5 Reactions)



[1007/3167] PWY-5982
sulfoacetaldehyde degradation II
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1008/3167] PWY-5983
trehalose biosynthesis VI
(1 Reactions)

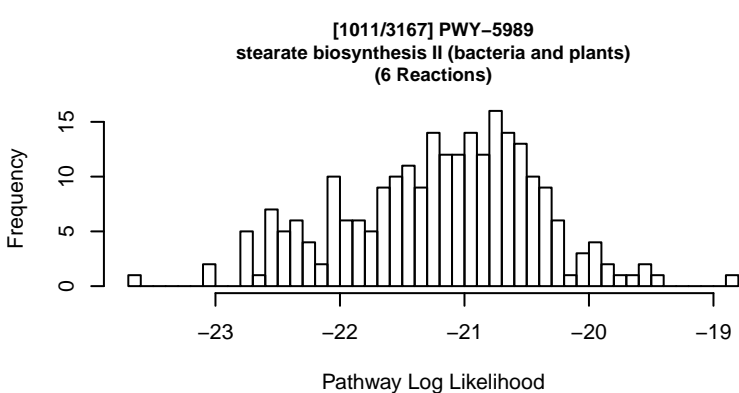
Zeros/-Inf for reaction(s) in Pathway

[1009/3167] PWY-5984
rifamycin B biosynthesis
(8 Reactions)

Missing 4 Reaction(s) from Pathway.

[1010/3167] PWY-5987
sorgoleone biosynthesis
(6 Reactions)

Missing 2 Reaction(s) from Pathway.



[1012/3167] PWY-5990
lotaustralin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1013/3167] PWY-5992
thalianol and derivatives biosynthesis
(3 Reactions)

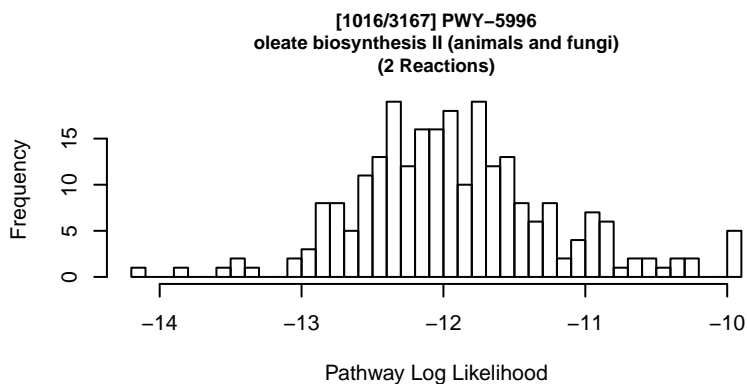
Missing 1 Reaction(s) from Pathway.

[1014/3167] PWY-5994
palmitate biosynthesis I (type I fatty acid synthase)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1015/3167] PWY-5995
linoleate biosynthesis I (plants)
(3 Reactions)

Missing ALL Reaction(s) from Pathway.



[1017/3167] PWY-5997
α-linolenate biosynthesis I (plants and red algae)
(2 Reactions)

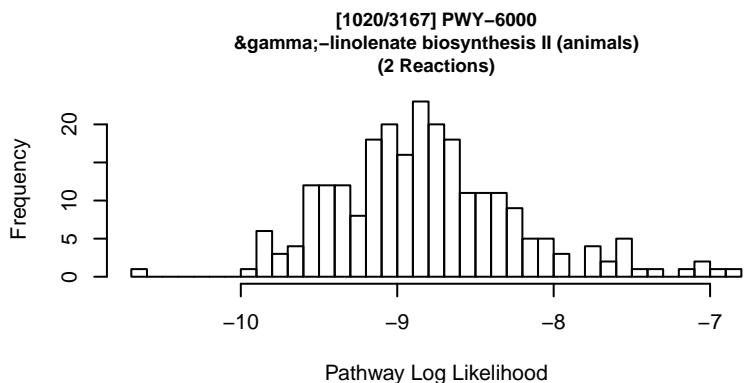
Missing ALL Reaction(s) from Pathway.

[1018/3167] PWY-5998
γ-linolenate biosynthesis I (plants)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1019/3167] PWY-6
GDP-L-fucose biosynthesis II (from L-fucose)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[1021/3167] PWY-6001
linoleate biosynthesis II (animals)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1022/3167] PWY-6002
lotaustralin degradation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1023/3167] PWY-6004
glycine betaine biosynthesis V (from glycine)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1024/3167] PWY-6005
marneral biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1025/3167] PWY-6007
(3*E*)-4,8-dimethylnona-1,3,7-triene biosynthesis II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1026/3167] PWY-6008
baruol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1027/3167] PWY-601
glucosinolate biosynthesis from tryptophan
(9 Reactions)

Missing 5 Reaction(s) from Pathway.

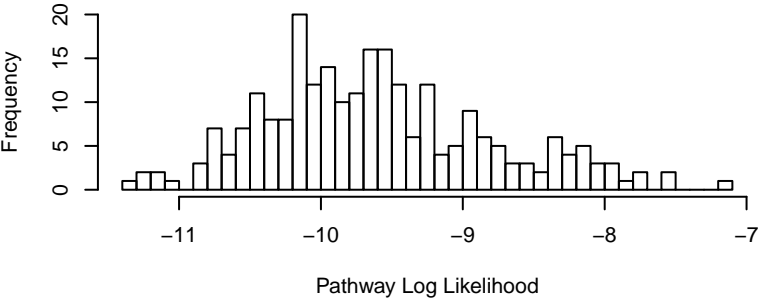
[1028/3167] PWY-6010
apigenin glycosides biosynthesis
(5 Reactions)

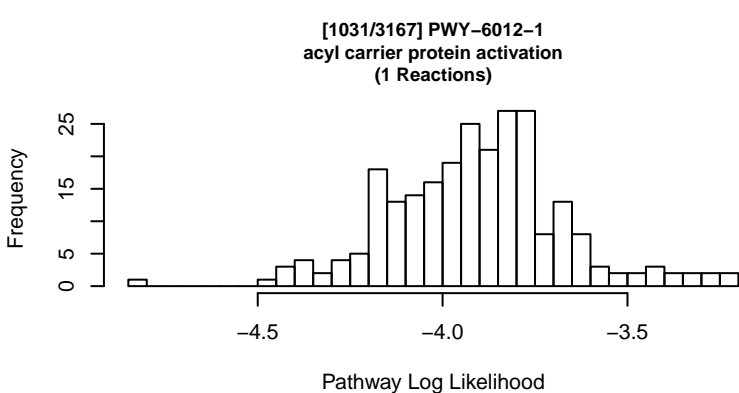
Missing 4 Reaction(s) from Pathway.

[1029/3167] PWY-6011
amygdalin and prunasin degradation
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1030/3167] PWY-6012
acyl carrier protein metabolism
(2 Reactions)





[1032/3167] PWY-6013
crepenynate biosynthesis
(1 Reactions)

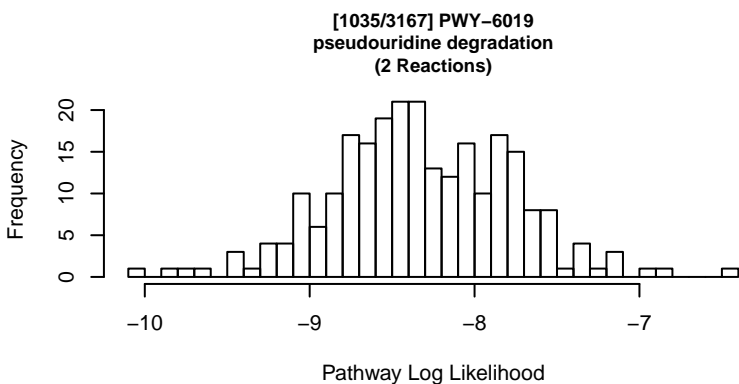
Missing ALL Reaction(s) from Pathway.

[1033/3167] PWY-6014
vernolate biosynthesis I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

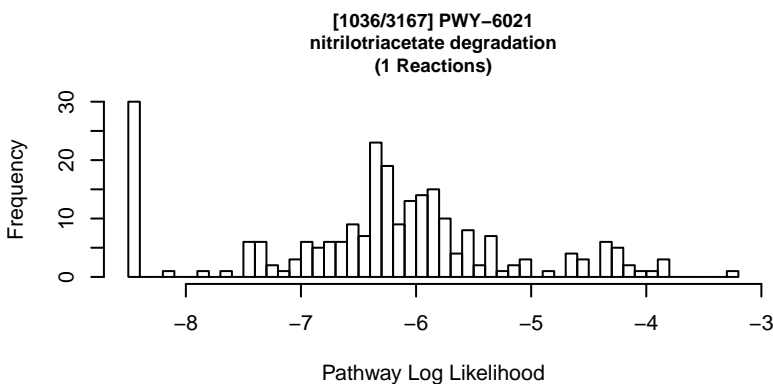
[1034/3167] PWY-6015
vitexin and derivatives biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.



[1037/3167] PWY-6024
isovitexin glycosides biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[1038/3167] PWY-6027
capsiconate biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1039/3167] PWY-6029
2,3-*trans*-flavanols biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1040/3167] PWY-6030
serotonin and melatonin biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1041/3167] PWY-6032
digitoxigenin biosynthesis
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

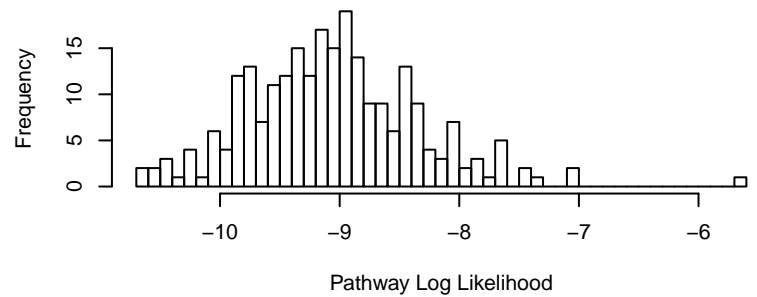
[1042/3167] PWY-6035
2,3-*cis*-flavanols biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1043/3167] PWY-6036
cardenolide glucosides biosynthesis
(7 Reactions)

Missing 5 Reaction(s) from Pathway.

[1044/3167] PWY-6038
citrate degradation
(2 Reactions)



[1045/3167] PWY-6039
chlorogenic acid biosynthesis I
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1046/3167] PWY-6040
chlorogenic acid biosynthesis II
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

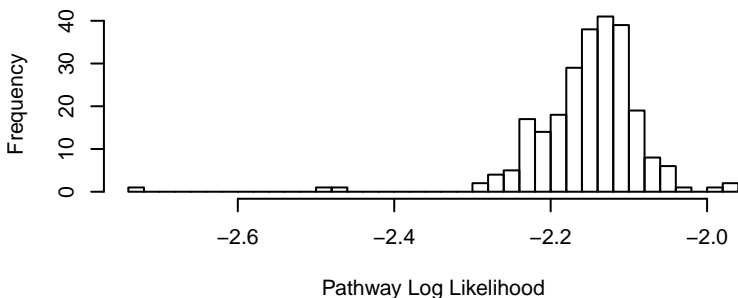
[1047/3167] PWY-6041
4-sulfocatechol degradation
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1048/3167] PWY-6044
methanesulfonate degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1049/3167] PWY-6045
methylthiopropionate degradation II (demethylation)
(1 Reactions)



[1050/3167] PWY-6046
dimethylsulfonylpropanoate degradation I (cleavage)
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1051/3167] PWY-6047
dimethyl sulfide degradation I
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1052/3167] PWY-6048
methylthiopropoate degradation I (cleavage)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1053/3167] PWY-6049
superpathway of dimethylsulfoniopropanoate degradation
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1054/3167] PWY-6050
dimethyl sulfoxide degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1055/3167] PWY-6051
2,4,6-trinitrotoluene degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1056/3167] PWY-6052
dimethylsulfoniopropanoate degradation III (demethylation)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1057/3167] PWY-6053
dimethylsulfoniopropanoate biosynthesis III (algae and phytoplankton)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

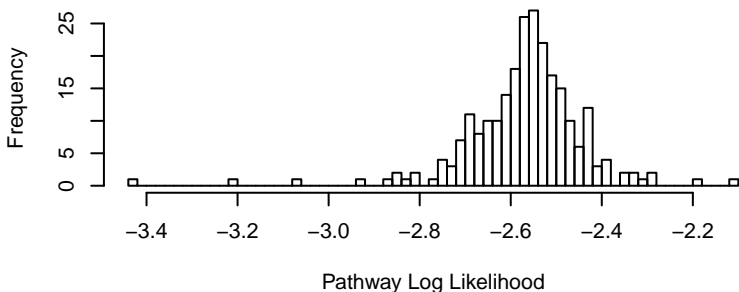
[1058/3167] PWY-6054
dimethylsulfoniopropanoate biosynthesis I (Wollastonia)
(2 Reactions)

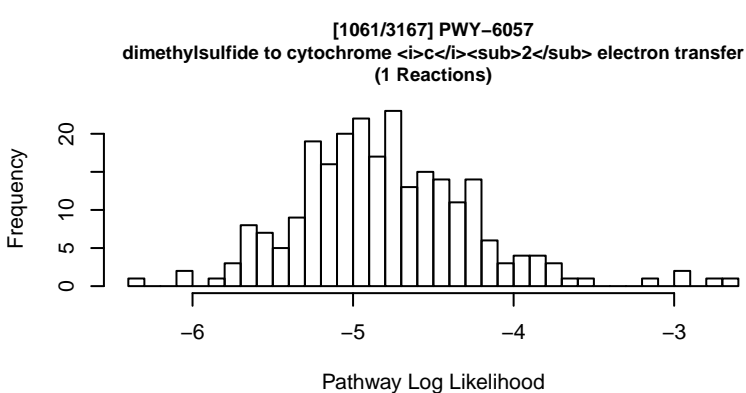
Missing 1 Reaction(s) from Pathway.

[1059/3167] PWY-6055
dimethylsulfoniopropanoate biosynthesis II (Spartina)
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1060/3167] PWY-6056
dimethylsulfoniopropanoate degradation II (cleavage)
(1 Reactions)



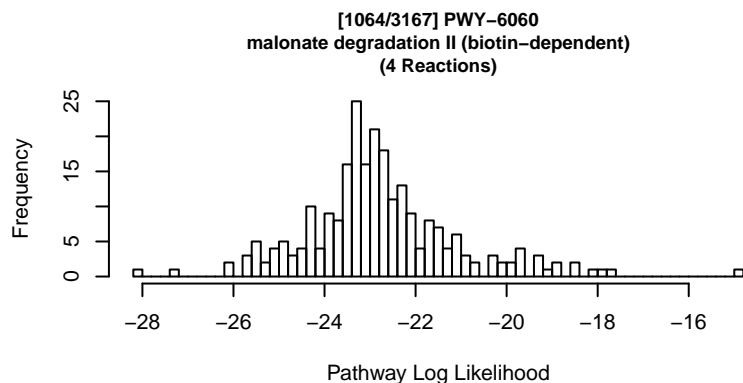


[1062/3167] PWY-6058
dimethyl sulfone degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1063/3167] PWY-6059
dimethyl sulfide degradation II (oxidation)
(3 Reactions)

Missing ALL Reaction(s) from Pathway.



[1065/3167] PWY-6061
bile acid biosynthesis, neutral pathway
(13 Reactions)

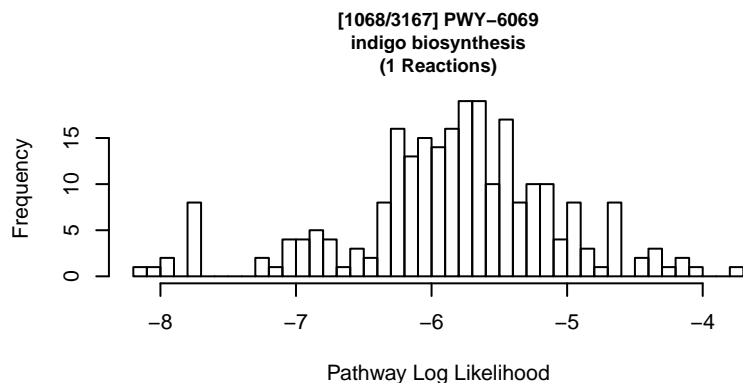
Missing 8 Reaction(s) from Pathway.

[1066/3167] PWY-6064
methylquercetin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1067/3167] PWY-6068
indican biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[1069/3167] PWY-6073
alginate biosynthesis I (algal)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1070/3167] PWY-6074
zymosterol biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[1071/3167] PWY-6075
ergosterol biosynthesis I
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

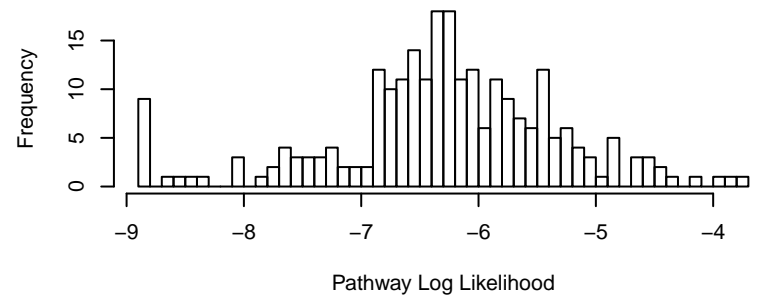
[1072/3167] PWY-6076
vitamin D₃ biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1073/3167] PWY-6077
anthranilate degradation II (aerobic)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1074/3167] PWY-6079
anthranilate degradation I (aerobic)
(1 Reactions)



[1075/3167] PWY-6080
4-ethylphenol degradation (anaerobic)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1076/3167] PWY-6081
1,3-dichlorobenzene degradation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1077/3167] PWY-6082
alginate biosynthesis II (bacterial)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1078/3167] PWY-6083
chlorobenzene degradation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1079/3167] PWY-6084
3,5-dichlorocatechol degradation
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1080/3167] PWY-6085
2,4-dichlorophenoxyacetate degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1081/3167] PWY-6086
4-chloro-2-methylphenoxyacetate degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1082/3167] PWY-6087
4-chlorocatechol degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1083/3167] PWY-6088
3-chlorobenzoate degradation I (via chlorocatechol)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1084/3167] PWY-6089
3-chlorocatechol degradation I (<i>ortho</i>)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1085/3167] PWY-6090
1,2-dichlorobenzene degradation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1086/3167] PWY-6091
1,2,4-trichlorobenzene degradation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1087/3167] PWY-6093
4,5-dichlorocatechol degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

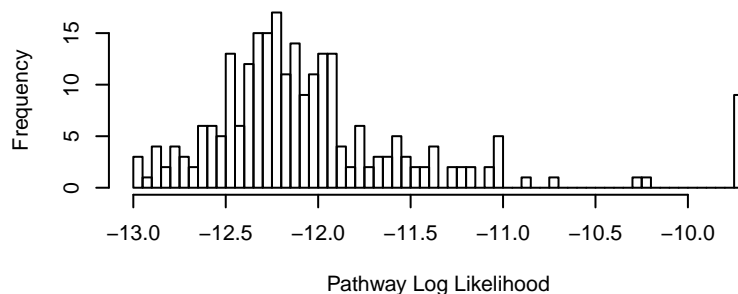
[1088/3167] PWY-6094
3,4,6-trichlorocatechol degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1089/3167] PWY-6095
dammar-20,24-diene biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1090/3167] PWY-6098
diploterol biosynthesis
(2 Reactions)



[1091/3167] PWY-6099
1,2,4,5-tetrachlorobenzene degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1092/3167] PWY-6100
L-carnitine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1093/3167] PWY-6102
5-chloro-3-methyl-catechol degradation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1094/3167] PWY-6103
3-chlorotoluene degradation I
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1095/3167] PWY-6104
3-chlorotoluene degradation II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1096/3167] PWY-6105
botryococcenes and methylated squalene biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1097/3167] PWY-6107
chlorosalicylate degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

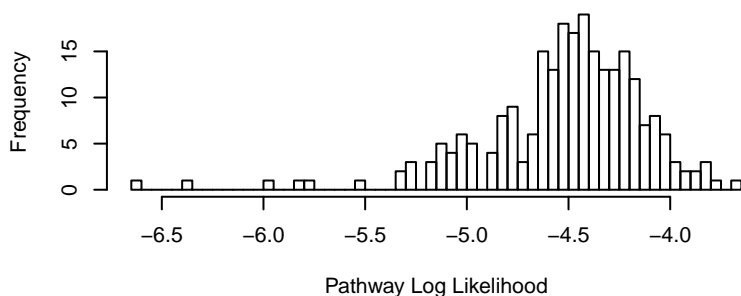
[1098/3167] PWY-6109
mangrove triterpenoid biosynthesis
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

[1099/3167] PWY-6111
mitochondrial L-carnitine shuttle
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1100/3167] PWY-6113
superpathway of mycolate biosynthesis
(1 Reactions)



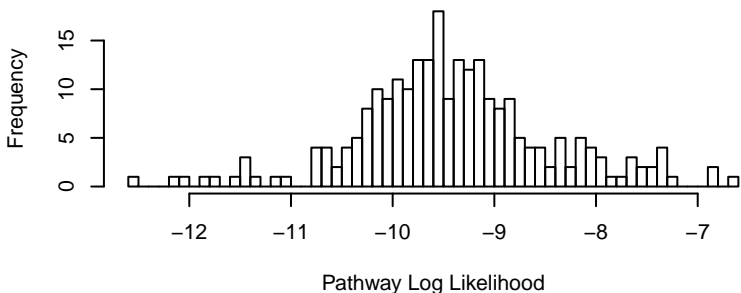
[1101/3167] PWY-6116
mannosylfructose biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1102/3167] PWY-6117
spermine and spermidine degradation I
(4 Reactions)

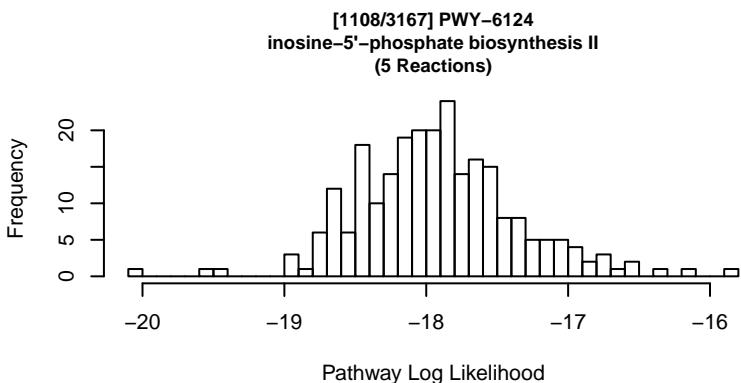
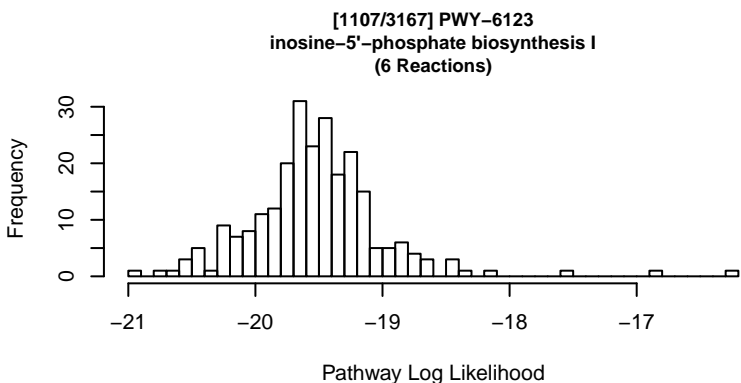
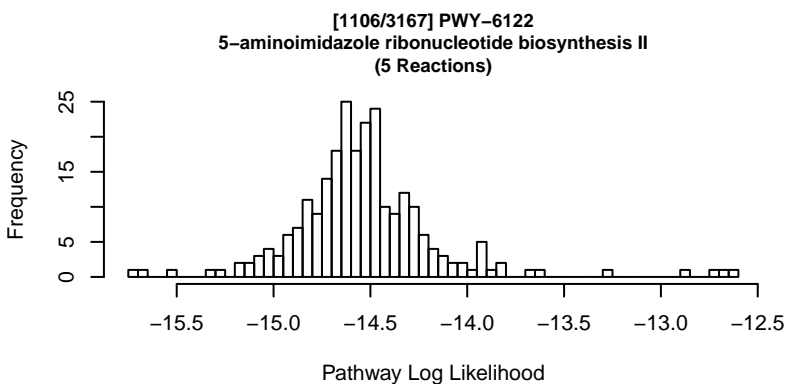
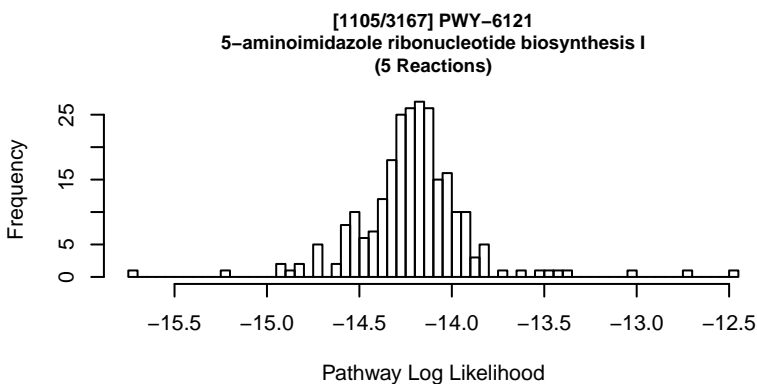
Missing 3 Reaction(s) from Pathway.

[1103/3167] PWY-6118
glycerol-3-phosphate shuttle
(2 Reactions)



[1104/3167] PWY-6120
L-tyrosine biosynthesis III
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

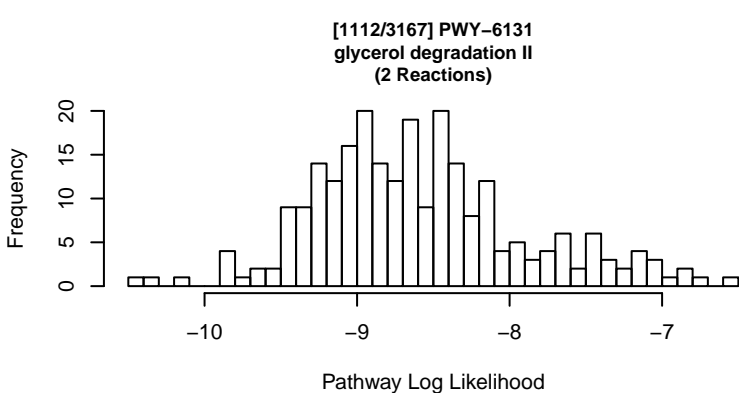
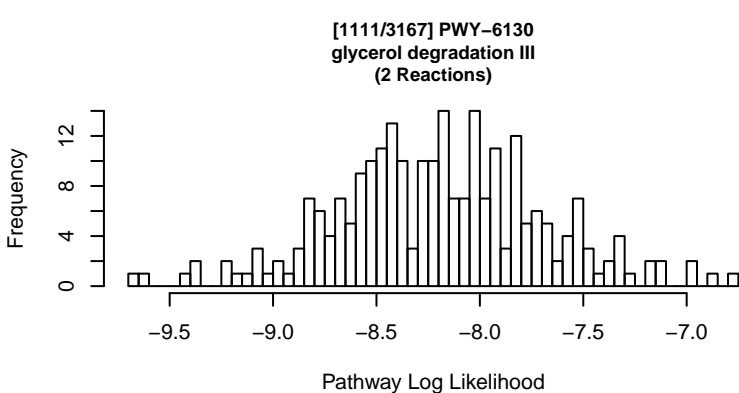


[1109/3167] PWY-6128
cis-calamenene related sesquiterpenoids biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1110/3167] PWY-6129
dolichol and dolichyl phosphate biosynthesis
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

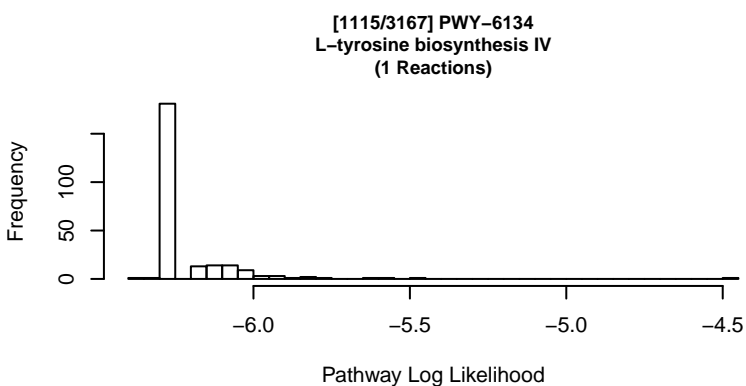


[1113/3167] PWY-6132
lanosterol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

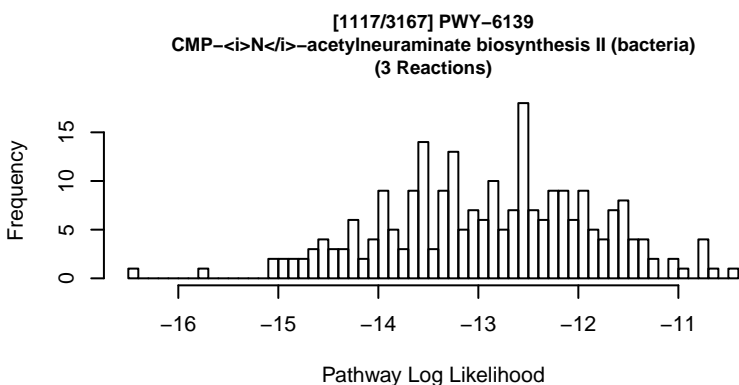
[1114/3167] PWY-6133
(S)-reticuline biosynthesis II
(4 Reactions)

Missing 2 Reaction(s) from Pathway.



[1116/3167] PWY-6138
CMP-*N*-acetylneuraminate biosynthesis I (eukaryotes)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



[1118/3167] PWY-6140
CMP-2-keto-3-deoxy-D-glycero-D-galacto-nononate biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

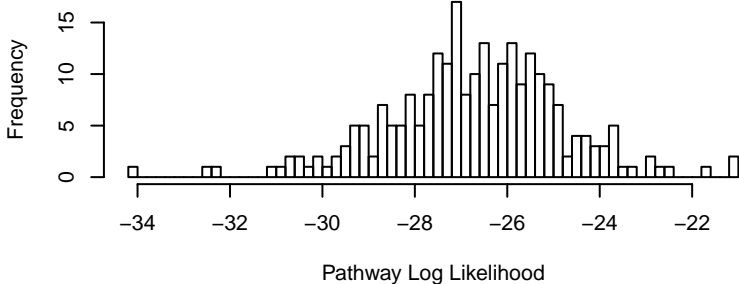
[1119/3167] PWY-6141
archaetidylserine and archaetidylethanolamine biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1120/3167] PWY-6142
gluconeogenesis II (*Methanobacterium thermoautotrophicum*)
(13 Reactions)

Missing 2 Reaction(s) from Pathway.

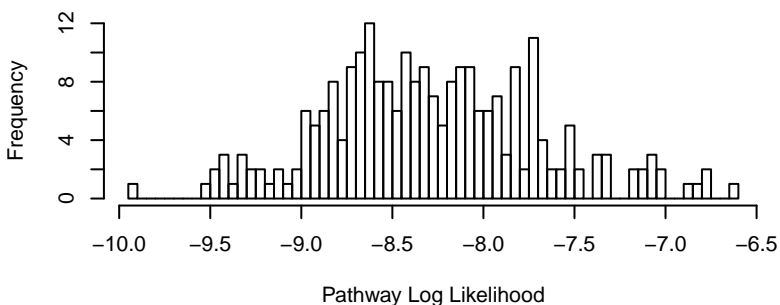
[1121/3167] PWY-6143
CMP-pseudamine biosynthesis
(6 Reactions)



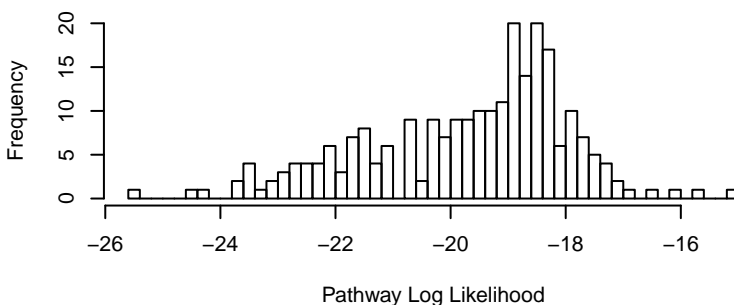
[1122/3167] PWY-6144
CMP-*N*-glycolylneuraminate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1123/3167] PWY-6146
Methanobacterium thermoautotrophicum biosynthetic metabolism
(2 Reactions)



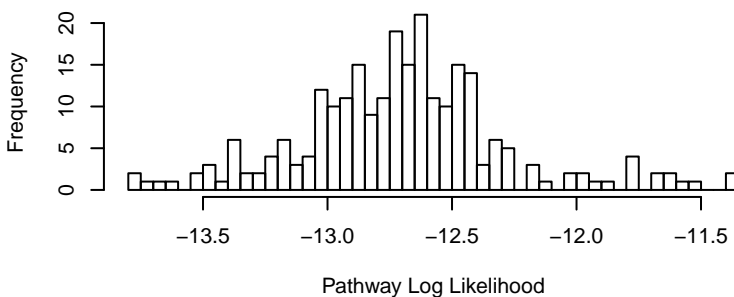
[1124/3167] PWY-6147
6-hydroxymethyl-dihydropterin diphosphate biosynthesis I
(5 Reactions)



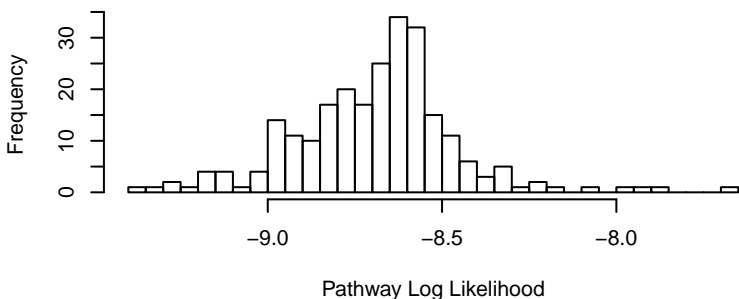
[1125/3167] PWY-6148
tetrahydromethanopterin biosynthesis
(11 Reactions)

Missing 1 Reaction(s) from Pathway.

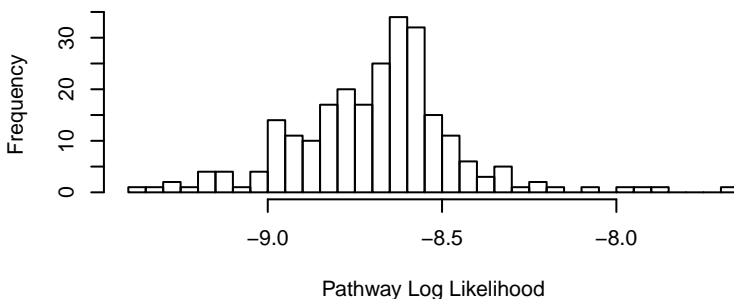
[1126/3167] PWY-6151
S-adenosyl-L-methionine salvage I
(4 Reactions)



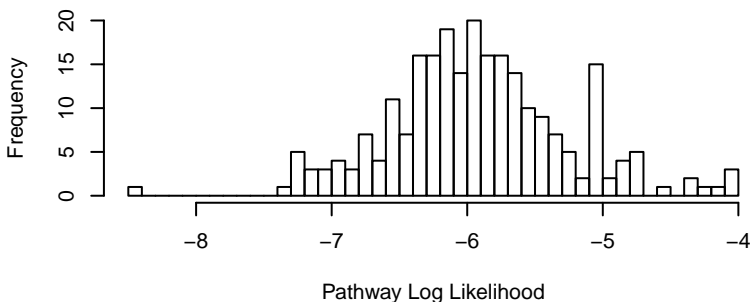
[1127/3167] PWY-6153
autoinducer AI-2 biosynthesis I
(3 Reactions)



[1128/3167] PWY-6154
autoinducer AI-2 biosynthesis II (*Vibrio*)
(3 Reactions)



[1129/3167] PWY-6157
autoinducer AI-1 biosynthesis
(1 Reactions)



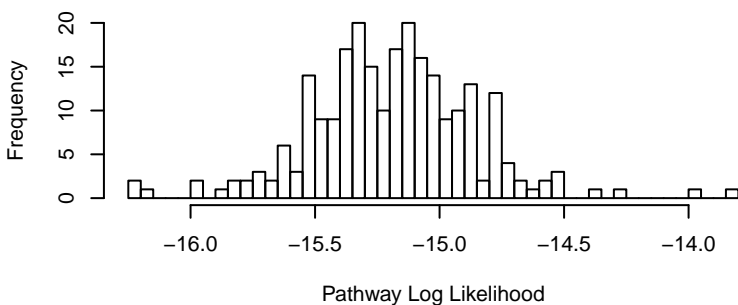
[1130/3167] PWY-6158
creatine phosphate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

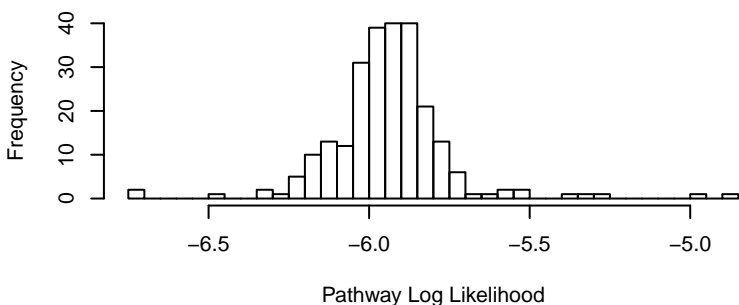
[1131/3167] PWY-6160
3-dehydroquinate biosynthesis II (archaea)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

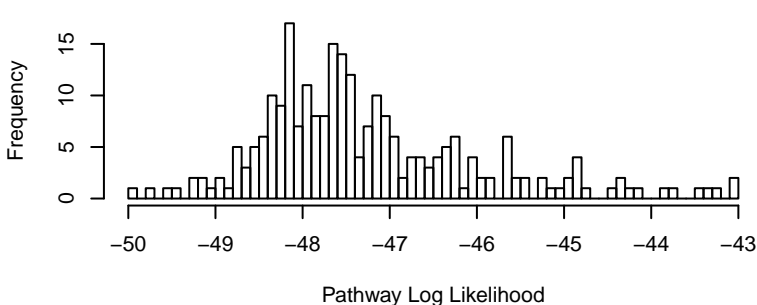
[1132/3167] PWY-6163
chorismate biosynthesis from 3-dehydroquinate
(5 Reactions)



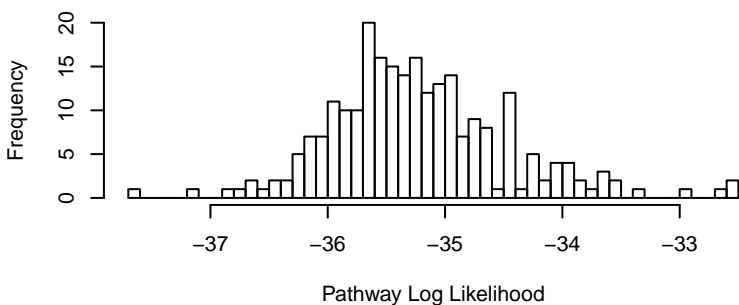
[1133/3167] PWY-6164
3-dehydroquinate biosynthesis I
(2 Reactions)



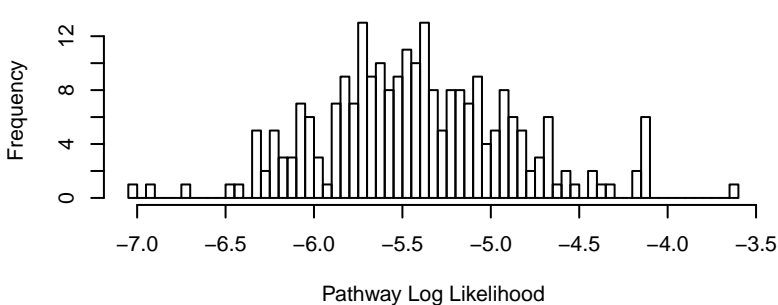
[1134/3167] PWY-6167
flavin biosynthesis II (archaea)
(10 Reactions)



[1135/3167] PWY-6168
flavin biosynthesis III (fungi)
(9 Reactions)



[1136/3167] PWY-6173
histamine biosynthesis
(1 Reactions)



[1137/3167] PWY-6174
mevalonate pathway II (haloarchaea)
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

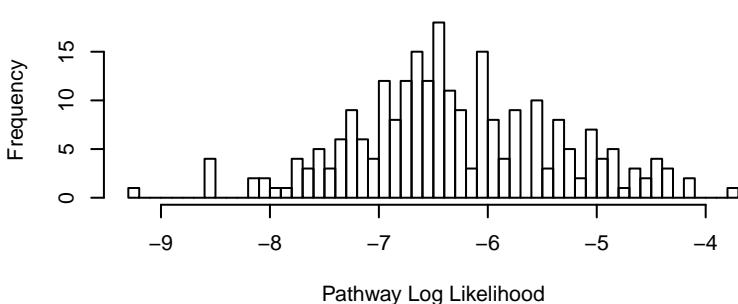
[1138/3167] PWY-6178
2,4,6-trichlorophenol degradation
(3 Reactions)

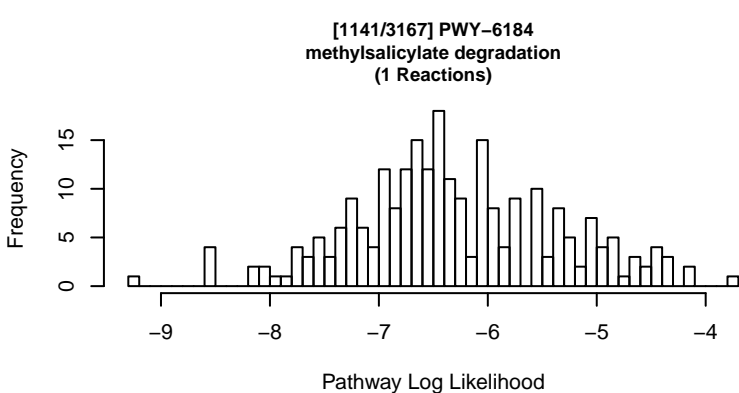
Missing 1 Reaction(s) from Pathway.

[1139/3167] PWY-6181
histamine degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1140/3167] PWY-6183
salicylate degradation I
(1 Reactions)





[1142/3167] PWY-6185
4-methylcatechol degradation (<i>ortho</i> cleavage)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1143/3167] PWY-6190
2,4-dichlorotoluene degradation
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[1144/3167] PWY-6191
2,5-dichlorotoluene degradation
(3 Reactions)

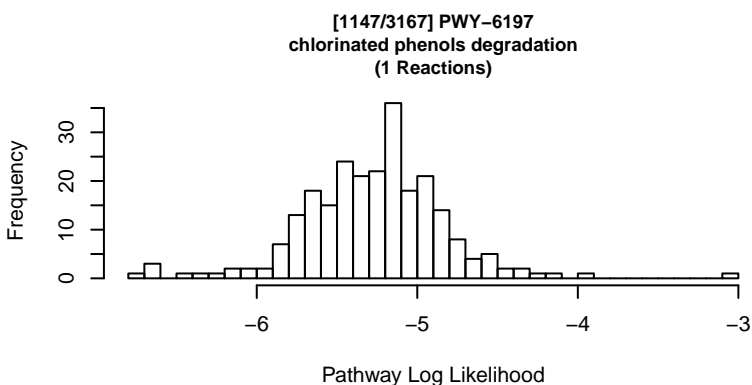
Missing 2 Reaction(s) from Pathway.

[1145/3167] PWY-6192
3,4-dichlorotoluene degradation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1146/3167] PWY-6193
3-chlorocatechol degradation II (<i>ortho</i>)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



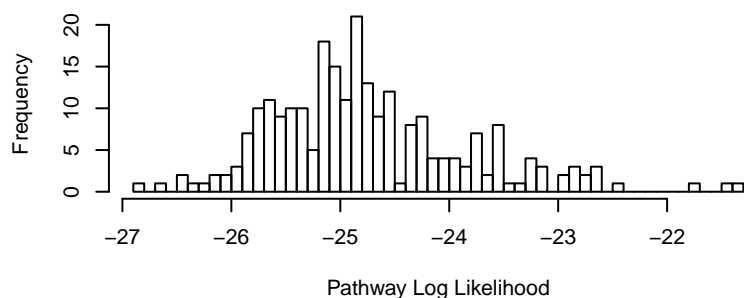
[1148/3167] PWY-6199
quercetin sulfate biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

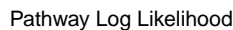
[1149/3167] PWY-6200
2,4,5-trichlorophenoxyacetate degradation
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1150/3167] PWY-621
sucrose degradation III (sucrose invertase)
(6 Reactions)



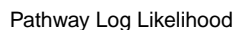
[1151/3167] PWY-6210
2-aminophenol degradation
(4 Reactions)



[1152/3167] PWY-6214
3-chlorocatechol degradation III (*meta* pathway)
(2 Reactions)



[1153/3167] PWY-6215
4-chlorobenzoate degradation
(4 Reactions)



[1154/3167] PWY-6216
3-chlorobenzoate degradation II (via protocatechuate)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1155/3167] PWY-6217
3,4-dichlorobenzoate degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1156/3167] PWY-6219
indole-3-acetate inactivation VIII
(1 Reactions)



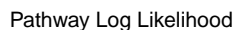
[1157/3167] PWY-622
starch biosynthesis
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[1158/3167] PWY-6220
jasmonoyl-amino acid conjugates biosynthesis I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1159/3167] PWY-6221
2-chlorobenzoate degradation
(1 Reactions)



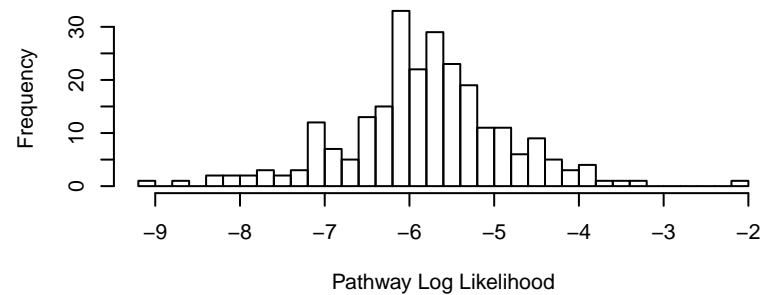
**[1160/3167] PWY-6223
gentisate degradation I
(3 Reactions)**

Zeros/-Inf for reaction(s) in Pathway

[1161/3167] PWY-6224
salicylate degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1162/3167] PWY-6228
3-chlorobenzoate degradation III (via gentisate)
(1 Reactions)



[1163/3167] PWY-6232
chrysoeriol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1164/3167] PWY-6233
jasmonoyl-amino acid conjugates biosynthesis II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1165/3167] PWY-6239
luteolin glycosides biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1166/3167] PWY-6241
thyroid hormone biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1167/3167] PWY-6243
bergamotene biosynthesis I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1168/3167] PWY-6244
bergamotene biosynthesis II
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1169/3167] PWY-6254
santalene biosynthesis I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1170/3167] PWY-6257
curcumene biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1171/3167] PWY-6258
patchoulol biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

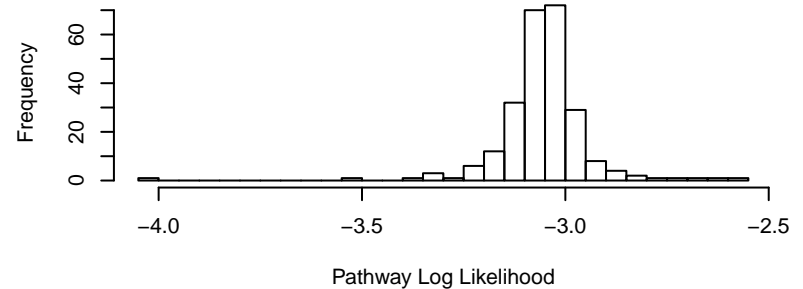
[1172/3167] PWY-6260
thyroid hormone metabolism I (via deiodination)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1173/3167] PWY-6261
thyroid hormone metabolism II (via conjugation and/or degradation)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1174/3167] PWY-6262
demethylmenaquinol-8 biosynthesis II
(1 Reactions)



[1175/3167] PWY-6265
zerumbone biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1176/3167] PWY-6269
superpathway of adenosylcobalamin salvage from cobinamide II
(6 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1177/3167] PWY-6270
isoprene biosynthesis I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1178/3167] PWY-6271
eudesmol biosynthesis
(3 Reactions)

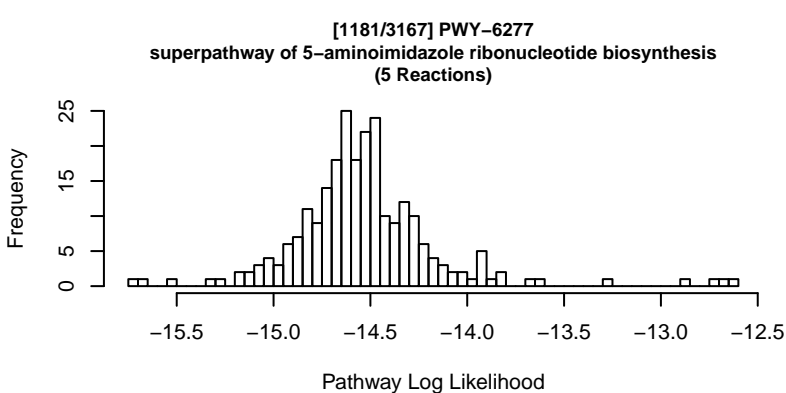
Missing ALL Reaction(s) from Pathway.

[1179/3167] PWY-6273
phosphatidylethanolamine biosynthesis III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1180/3167] PWY-6275
β-caryophyllene biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.



[1182/3167] PWY-6278
botrydial biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1183/3167] PWY-6279
myxol-2' fucoside biosynthesis
(6 Reactions)

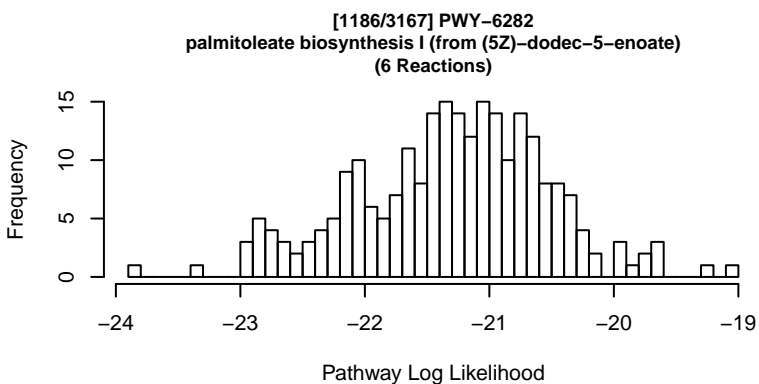
Missing 1 Reaction(s) from Pathway.

[1184/3167] PWY-6280
synechoxanthin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1185/3167] PWY-6281
L-selenocysteine biosynthesis II (archaea and eukaryotes)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

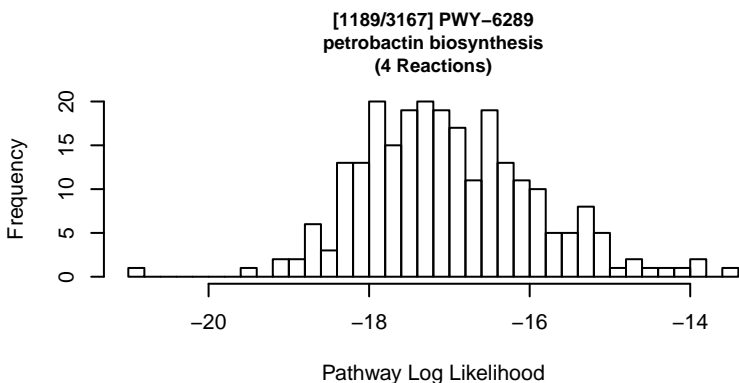


[1187/3167] PWY-6286
spheroidene and spheroidenone biosynthesis
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1188/3167] PWY-6288
zeaxanthin-β-D-diglucoside biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1190/3167] PWY-6290
β-cubebene biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1191/3167] PWY-6291
valencene and 7- β -epi- α -selinene biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1192/3167] PWY-6294
selinene biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1193/3167] PWY-6297
tuberonate glucoside biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1194/3167] PWY-63
UDP- β -L-arabinose biosynthesis I (from UDP- α -D-xylose)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1195/3167] PWY-6303
methyl indole-3-acetate interconversion
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1196/3167] PWY-6304
casbene biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1197/3167] PWY-6307
L-tryptophan degradation X (mammalian, via tryptamine)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

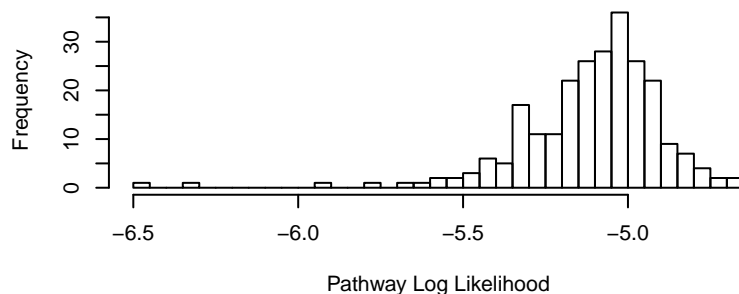
[1198/3167] PWY-6308
L-cysteine biosynthesis II (tRNA-dependent)
(3 Reactions)

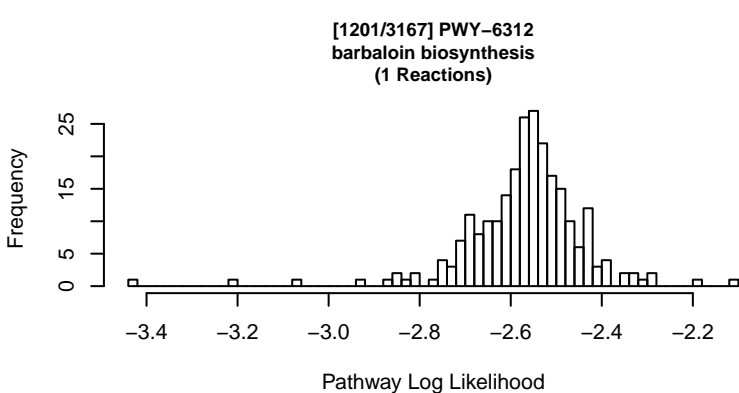
Missing 2 Reaction(s) from Pathway.

[1199/3167] PWY-6309
L-tryptophan degradation XI (mammalian, via kynurenine)
(12 Reactions)

Missing 4 Reaction(s) from Pathway.

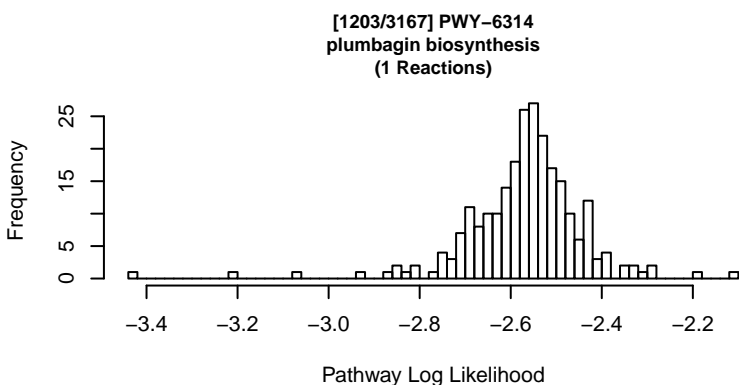
[1200/3167] PWY-6310
aloesone biosynthesis II
(2 Reactions)





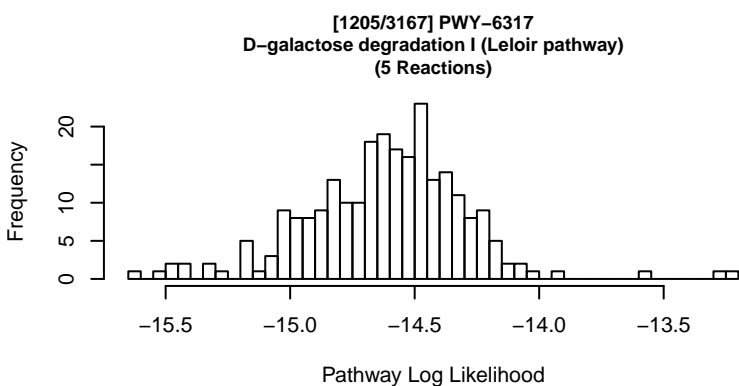
[1202/3167] PWY-6313
serotonin degradation
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1204/3167] PWY-6316
aromatic polyketides biosynthesis
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

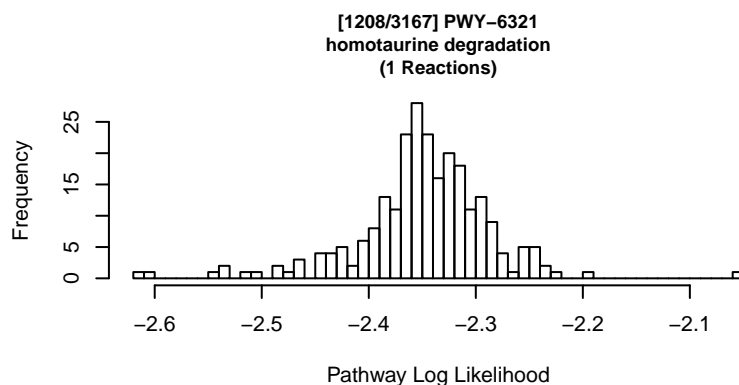


[1206/3167] PWY-6318
L-phenylalanine degradation IV (mammalian, via side chain)
(12 Reactions)

Missing 4 Reaction(s) from Pathway.

[1207/3167] PWY-6320
phasellate biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.



[1209/3167] PWY-6322
phosphinothricin tripeptide biosynthesis
(20 Reactions)

Missing 5 Reaction(s) from Pathway.

[1210/3167] PWY-6323
benzoylanthranilate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

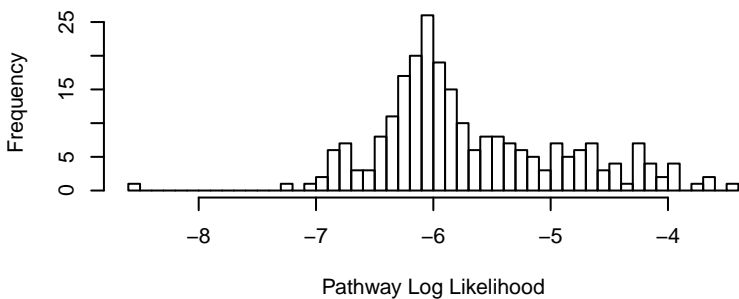
[1211/3167] PWY-6324
rebeccamycin biosynthesis
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[1212/3167] PWY-6325
echinatin biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

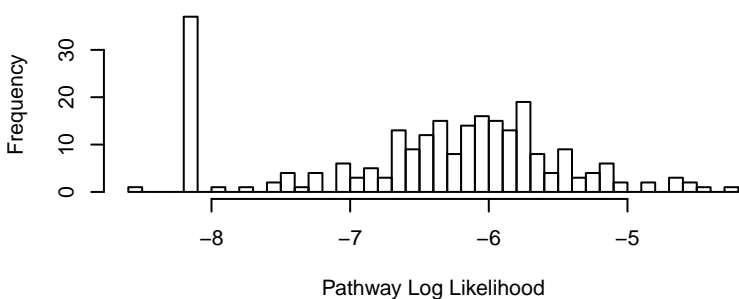
[1213/3167] PWY-6326
camptothecin biosynthesis
(1 Reactions)



[1214/3167] PWY-6328
L-lysine degradation X
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

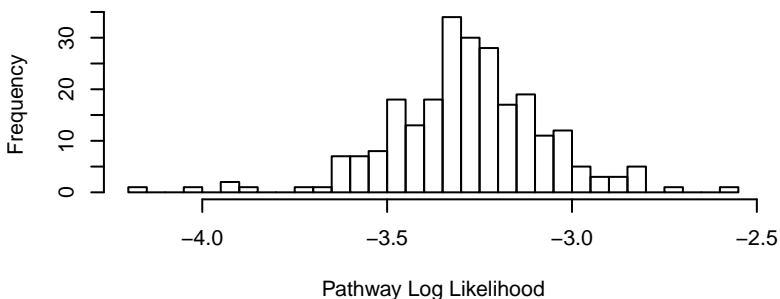
[1215/3167] PWY-6330
acetaldehyde biosynthesis II
(1 Reactions)



[1216/3167] PWY-6332
coumestrol biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1217/3167] PWY-6333
acetaldehyde biosynthesis I
(1 Reactions)



[1218/3167] PWY-6334
L-dopa degradation I (mammalian)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1219/3167] PWY-6336
protocatechuate degradation III (<l>para</l>-cleavage pathway)
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

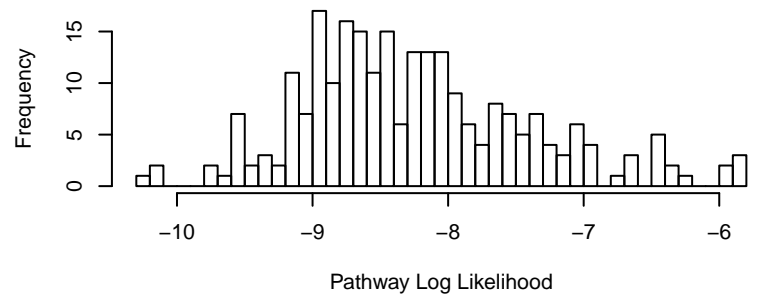
[1220/3167] PWY-6337
dehydroscoulerine biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1221/3167] PWY-6339
syringate degradation
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[1222/3167] PWY-6340
5,5'-dehydrodivanillate degradation
(2 Reactions)



[1223/3167] PWY-6342
noradrenaline and adrenaline degradation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[1224/3167] PWY-6343
ferulate degradation
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1225/3167] PWY-6344
L-arginine degradation XIV (oxidative Stickland reaction)
(6 Reactions)

Zeros/-Inf for reaction(s) in Pathway

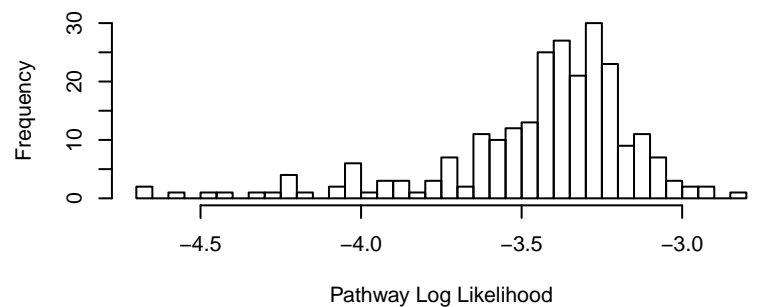
[1226/3167] PWY-6345
K-252 biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1227/3167] PWY-6346
staurosporine biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

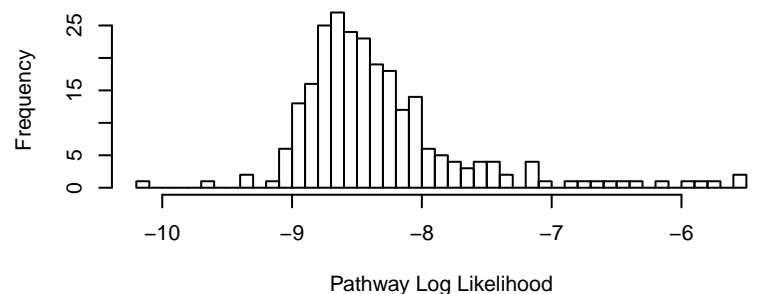
[1228/3167] PWY-6348
phosphate acquisition
(1 Reactions)



[1229/3167] PWY-6349
CDP-archaeol biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1230/3167] PWY-6350
archaetidylinositol biosynthesis
(2 Reactions)



[1231/3167] PWY-6351
D-*myo*-inositol (1,4,5)-trisphosphate biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1232/3167] PWY-6352
3-phosphoinositide biosynthesis
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

[1233/3167] PWY-6361
1D-*myo*-inositol hexakisphosphate biosynthesis I (from Ins(1,4,5)P3)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1234/3167] PWY-6362
1D-*myo*-inositol hexakisphosphate biosynthesis II (mammalian)
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[1235/3167] PWY-6363
D-*myo*-inositol (1,4,5)-trisphosphate degradation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1236/3167] PWY-6364
D-*myo*-inositol (1,3,4)-trisphosphate biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1237/3167] PWY-6365
D-*myo*-inositol (3,4,5,6)-tetrakisphosphate biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1238/3167] PWY-6366
D-*myo*-inositol (1,4,5,6)-tetrakisphosphate biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1239/3167] PWY-6367
D-*myo*-inositol-5-phosphate metabolism
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1240/3167] PWY-6368
3-phosphoinositide degradation
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[1241/3167] PWY-6369
inositol diphosphates biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1242/3167] PWY-6370
ascorbate recycling (cytosolic)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

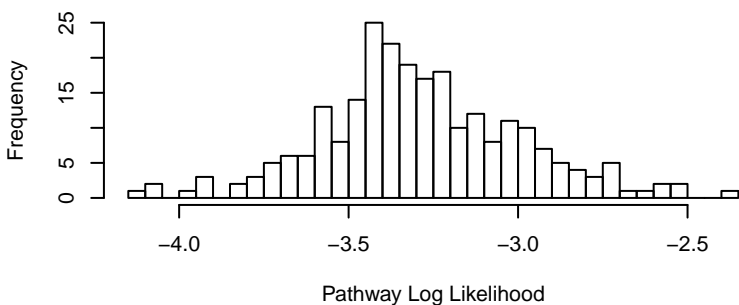
[1243/3167] PWY-6372
1D-*myo*-inositol hexakisphosphate biosynthesis IV (*Dictyostelium*)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1244/3167] PWY-6373
acrylate degradation I
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

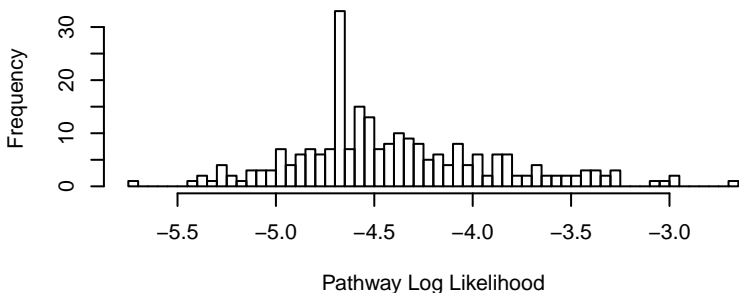
[1245/3167] PWY-6374
vibriobactin biosynthesis
(1 Reactions)



[1246/3167] PWY-6375
desferrioxamine E biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1247/3167] PWY-6376
desferrioxamine B biosynthesis
(1 Reactions)



[1248/3167] PWY-6377
α-tocopherol degradation
(1 Reactions)

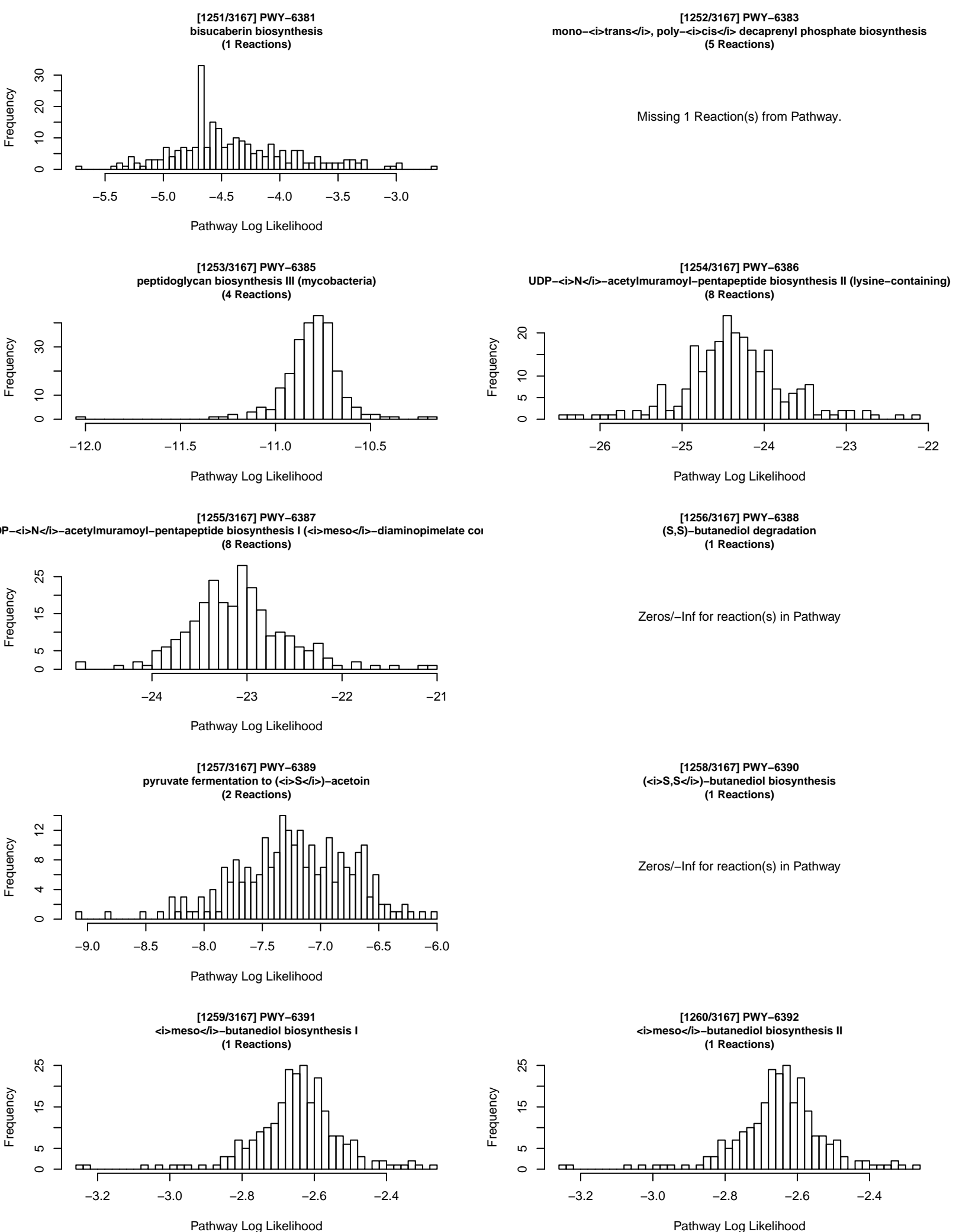
Missing ALL Reaction(s) from Pathway.

[1249/3167] PWY-6378
putrebactin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1250/3167] PWY-6379
alcaligin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



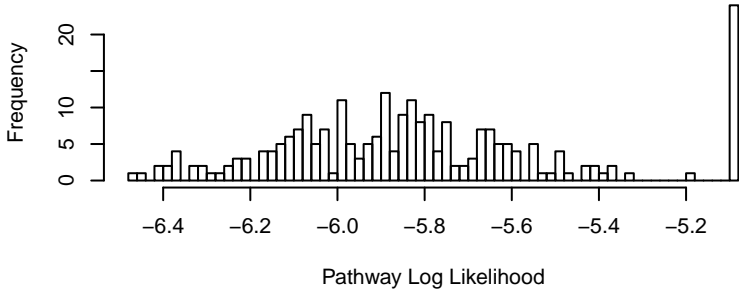
[1261/3167] PWY-6397
mycolyl-arabinogalactan-peptidoglycan complex biosynthesis
(12 Reactions)

Missing 2 Reaction(s) from Pathway.

[1262/3167] PWY-6398
melatonin degradation I
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

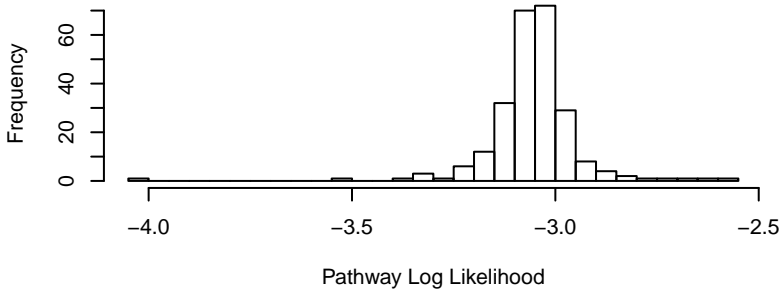
[1263/3167] PWY-6399
melatonin degradation II
(1 Reactions)



[1264/3167] PWY-6401
hispidol and hispidol 4'-O-<i>β</i>-D-glucoside biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1265/3167] PWY-6403
carrageenan biosynthesis
(1 Reactions)



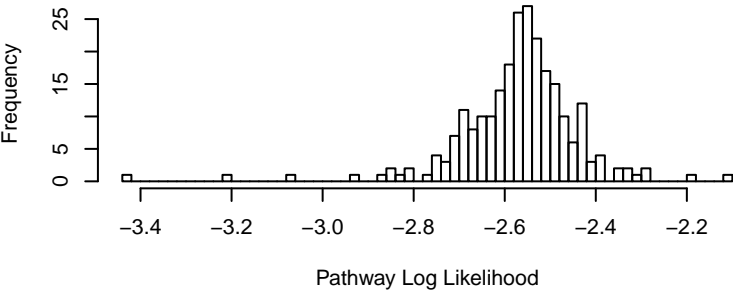
[1266/3167] PWY-6405
Rapoport-Luebering glycolytic shunt
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1267/3167] PWY-6406
salicylate biosynthesis I
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1268/3167] PWY-6407
yersiniabactin biosynthesis
(1 Reactions)



[1269/3167] PWY-6409
pyoverdine I biosynthesis
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

[1270/3167] PWY-641
proanthocyanidins biosynthesis from flavanols
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[1271/3167] PWY-6411
ginsenoside degradation I
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1272/3167] PWY-6412
ginsenoside degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

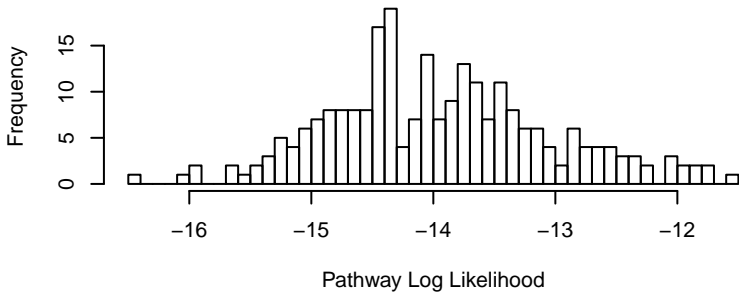
[1273/3167] PWY-6413
ginsenoside degradation III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1274/3167] PWY-6415
L-ascorbate biosynthesis V (euglena, D-galacturonate pathway)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1275/3167] PWY-6416
quinat degradation II
(3 Reactions)



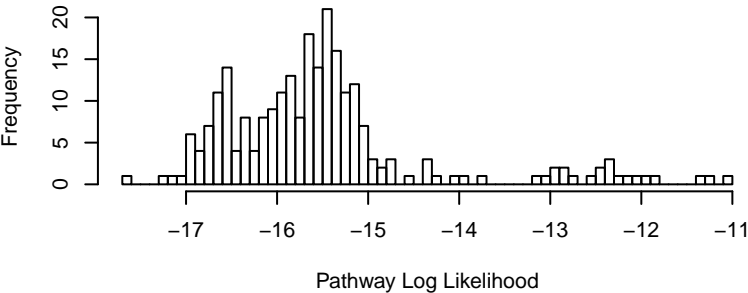
[1276/3167] PWY-6418
4-hydroxycoumarin and dicoumarol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1277/3167] PWY-6419
shikimate degradation II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1278/3167] PWY-6420
pyrroloquinoline quinone biosynthesis
(3 Reactions)



[1279/3167] PWY-6421
arsenate detoxification IV (mycothiol)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1280/3167] PWY-6422
D-arginine degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1281/3167] PWY-6423
hemoglobin degradation
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

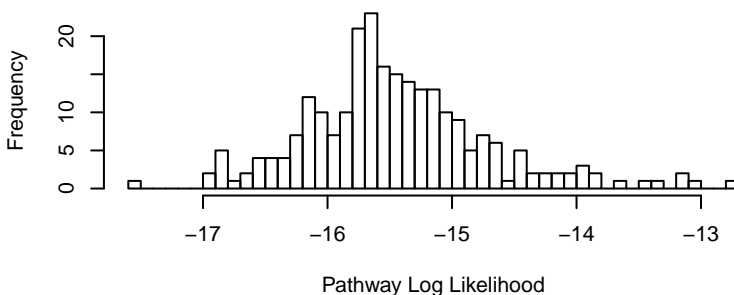
[1282/3167] PWY-6426
uracil degradation II (oxidative)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1283/3167] PWY-6427
rot-2'-enonate biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1284/3167] PWY-6430
thymine degradation
(3 Reactions)



[1285/3167] PWY-6431
4-hydroxybenzoate biosynthesis IV (plants)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

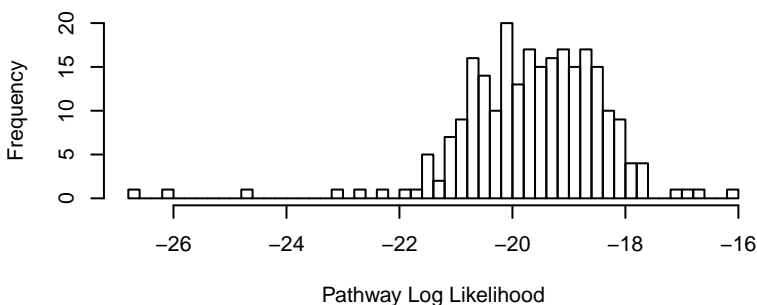
[1286/3167] PWY-6432
curcuminoid biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1287/3167] PWY-6433
hydroxylated fatty acid biosynthesis (plants)
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[1288/3167] PWY-6435
4-hydroxybenzoate biosynthesis III (plants)
(4 Reactions)



[1289/3167] PWY-6436
perillyl aldehyde biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1290/3167] PWY-6437
fenchol biosynthesis I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1291/3167] PWY-6438
phenylphenalenone biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1292/3167] PWY-6440
spermine and spermidine degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1293/3167] PWY-6441
spermine and spermidine degradation III
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1294/3167] PWY-6442
spermidine hydroxycinnamic acid conjugates biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1295/3167] PWY-6443
benzoate biosynthesis I (CoA-dependent, β -oxidative)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

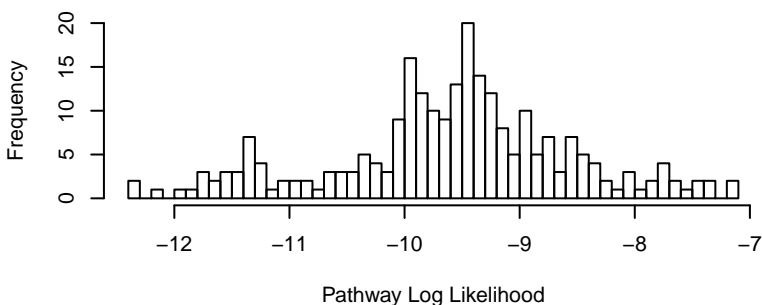
[1296/3167] PWY-6444
benzoate biosynthesis II (CoA-independent, non- β -oxidative)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1297/3167] PWY-6445
fenchol biosynthesis II
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1298/3167] PWY-6446
benzoate biosynthesis III (CoA-dependent, non- β -oxidative)
(2 Reactions)



[1299/3167] PWY-6447
trichome monoterpenes biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1300/3167] PWY-6448
hordatine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1301/3167] PWY-6449
fenchone biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

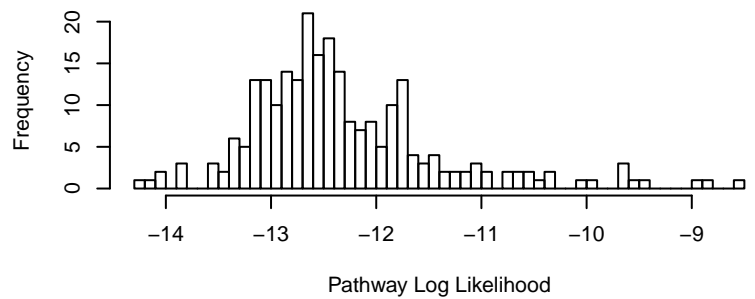
[1302/3167] PWY-6451
3-carene biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

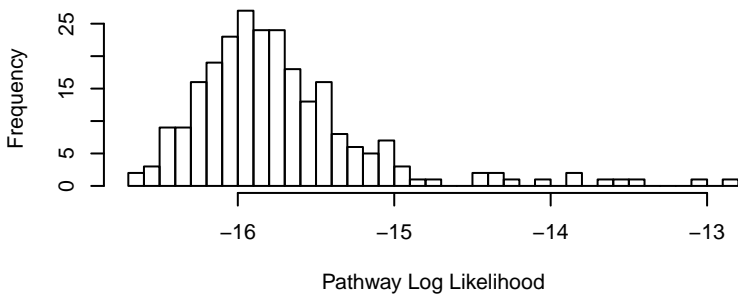
[1303/3167] PWY-6453
stigma estolide biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1304/3167] PWY-6454
vancomycin resistance I
(3 Reactions)



[1305/3167] PWY-6455
vancomycin resistance II
(3 Reactions)



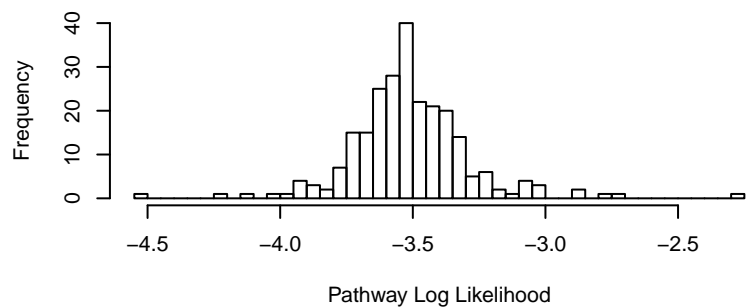
[1306/3167] PWY-6456
serinol biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

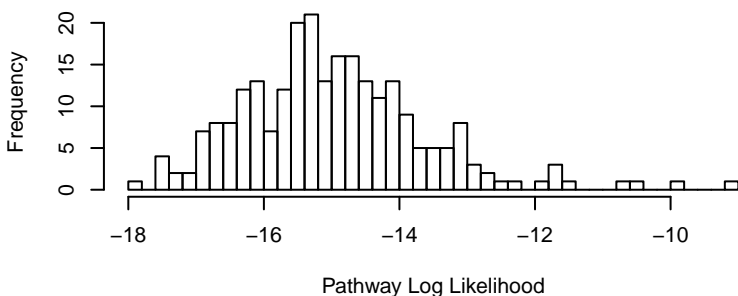
[1307/3167] PWY-6457
cinnamoyl-CoA biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

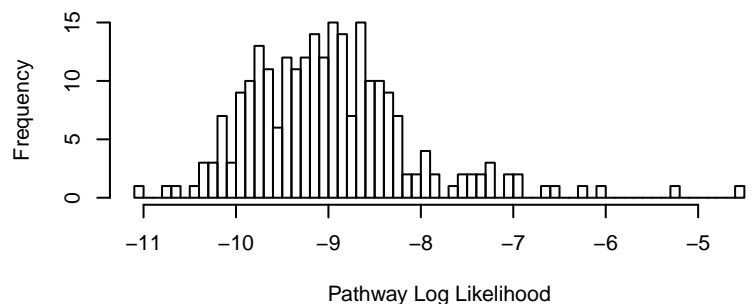
[1308/3167] PWY-6458
benzoyl-CoA biosynthesis
(1 Reactions)

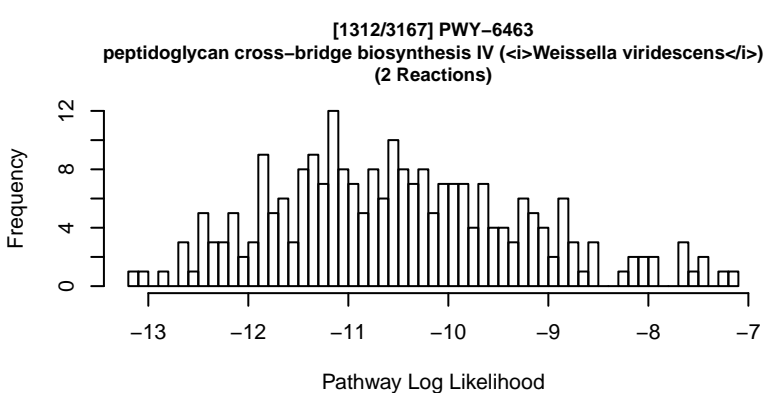
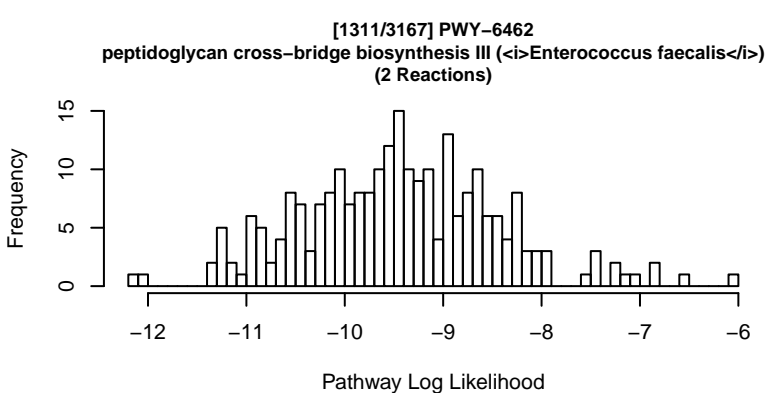


[1309/3167] PWY-6459
peptidoglycan cross-bridge biosynthesis I (*S. aureus*)
(3 Reactions)



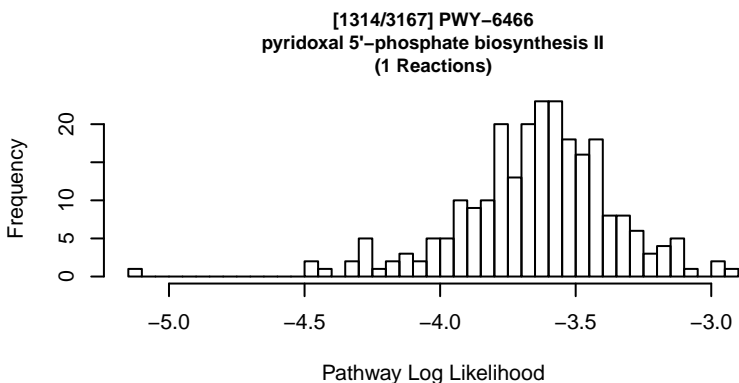
[1310/3167] PWY-6461
peptidoglycan cross-bridge biosynthesis II (*E. faecium*)
(2 Reactions)





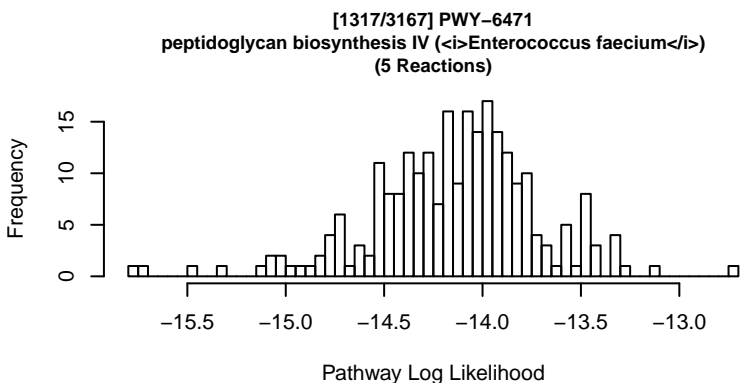
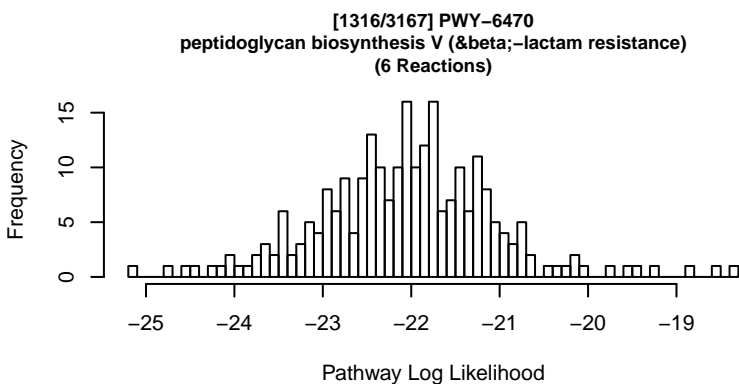
[1313/3167] PWY-6464
polyvinyl alcohol degradation
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1315/3167] PWY-6467
Kdo transfer to lipid IV_A (<i>Chlamydia</i>)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

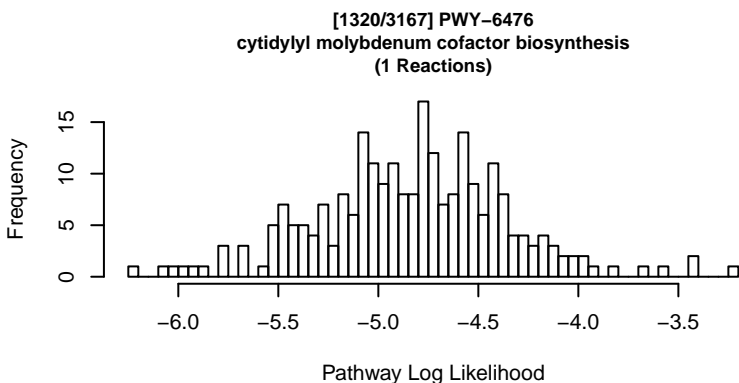


[1318/3167] PWY-6473
4-aminobutanoate degradation IV
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1319/3167] PWY-6475
<i>trans</i>-lycopene biosynthesis II (oxygenic phototrophs and green sulfur bacteria)
(2 Reactions)

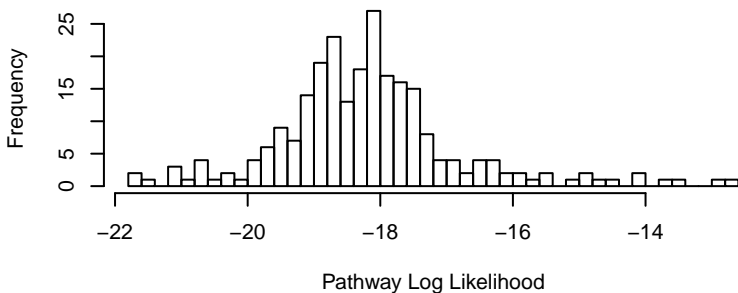
Missing 1 Reaction(s) from Pathway.



[1321/3167] PWY-6477
gibberellin inactivation II (methylation)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

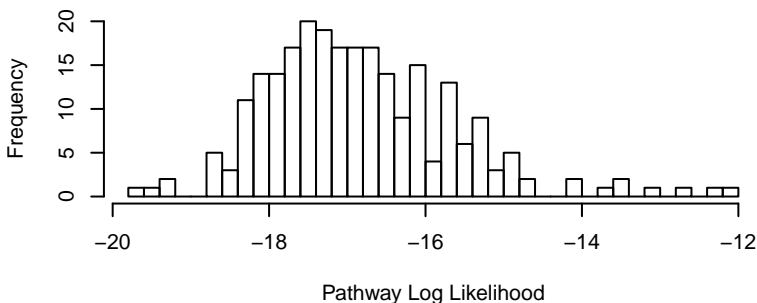
[1322/3167] PWY-6478
GDP-D-<i>glycero</i>-α-D-<i>manno</i>-heptose biosynthesis
(4 Reactions)



[1323/3167] PWY-6481
L-dopa and L-dopachrome biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1324/3167] PWY-6482
diphthamide biosynthesis I (archaea)
(3 Reactions)



[1325/3167] PWY-6483
ceramide degradation (generic)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1326/3167] PWY-6486
D-galacturonate degradation II
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

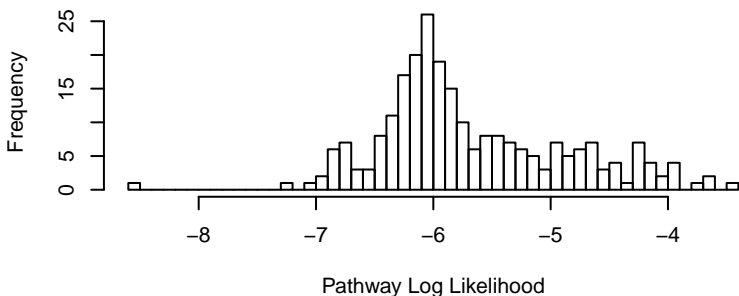
[1327/3167] PWY-6491
D-galacturonate degradation III
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[1328/3167] PWY-6493
chanoclavine I aldehyde biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

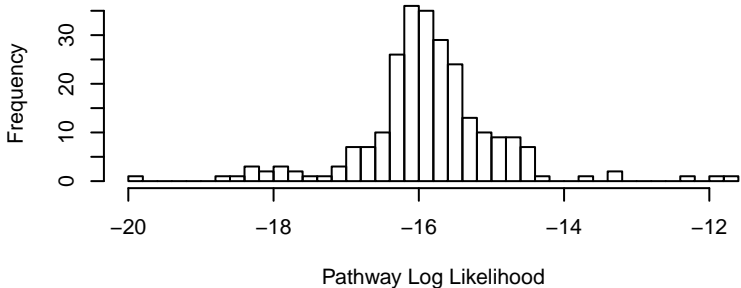
[1329/3167] PWY-6494
gibberellin inactivation III (epoxidation)
(1 Reactions)



[1330/3167] PWY-6495
ergotamine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

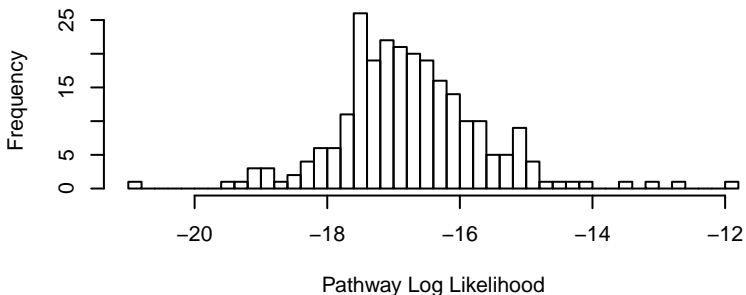
[1331/3167] PWY-6497
D-galactarate degradation II
(3 Reactions)



[1332/3167] PWY-6498
eumelanin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

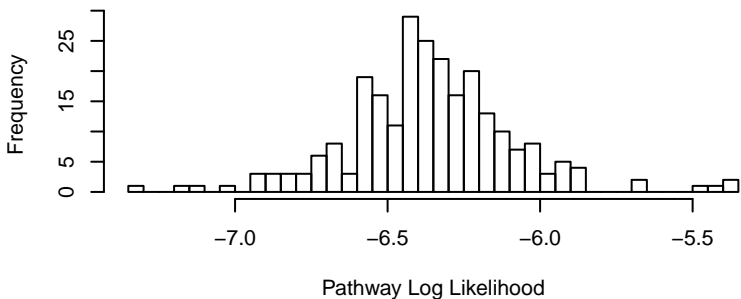
[1333/3167] PWY-6499
D-glucarate degradation II
(3 Reactions)



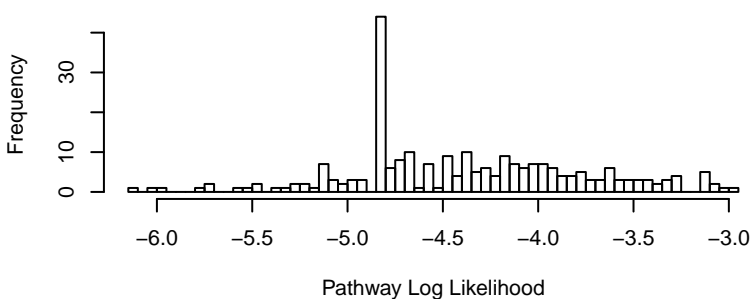
[1334/3167] PWY-6501
D-glucuronate degradation II
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1335/3167] PWY-6502
8-oxo-(d)GTP detoxification I
(2 Reactions)



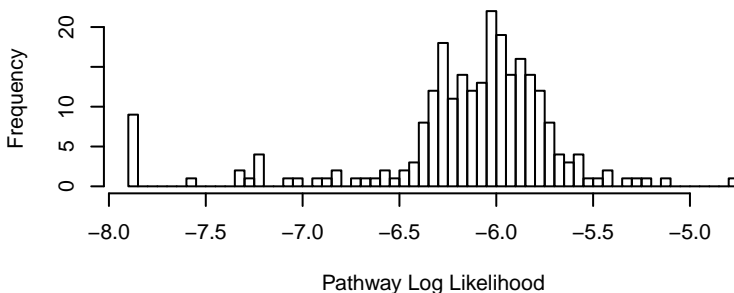
[1336/3167] PWY-6503
superpathway of ergotamine biosynthesis
(1 Reactions)



[1337/3167] PWY-6504
anthranilate degradation IV (aerobic)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1338/3167] PWY-6505
L-tryptophan degradation XII (Geobacillus)
(1 Reactions)

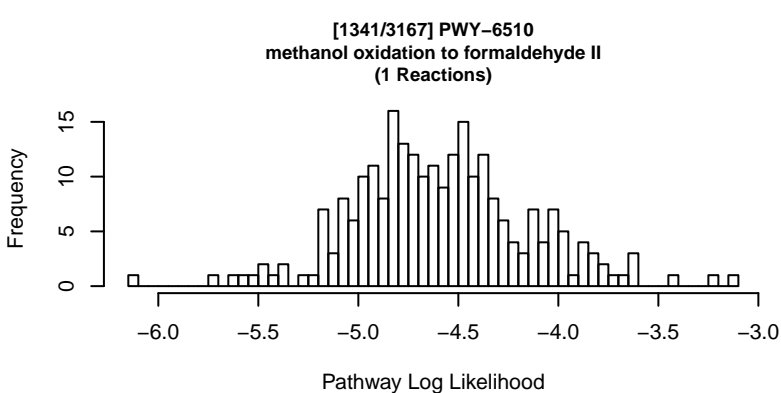


[1339/3167] PWY-6507
4-deoxy-L-threo-hex-4-enopyranuronate degradation
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

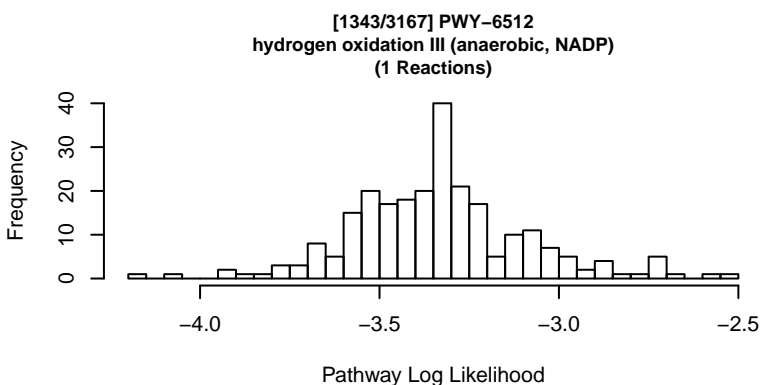
[1340/3167] PWY-6509
methanol oxidation to formaldehyde III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



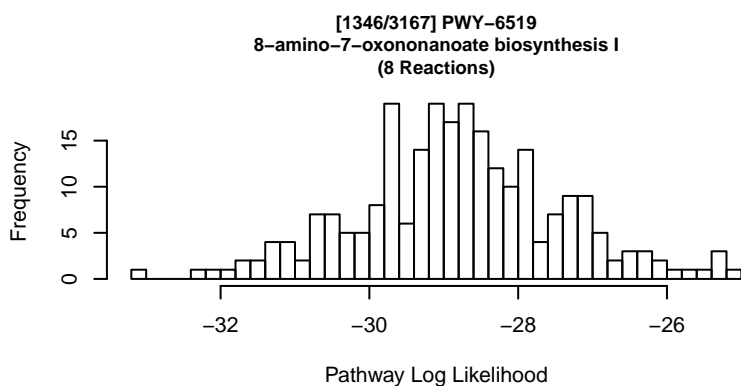
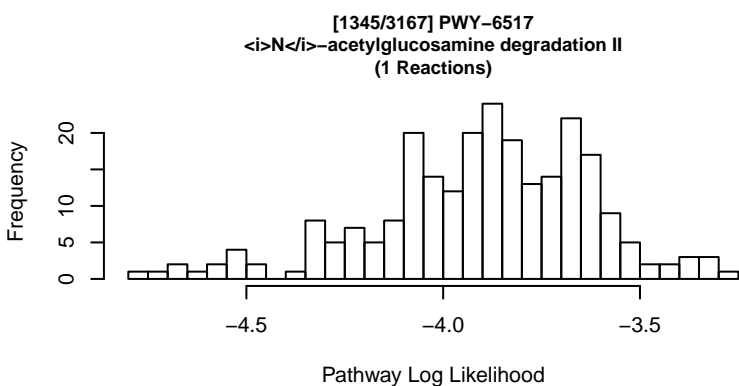
[1342/3167] PWY-6511
3-methylarginine biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



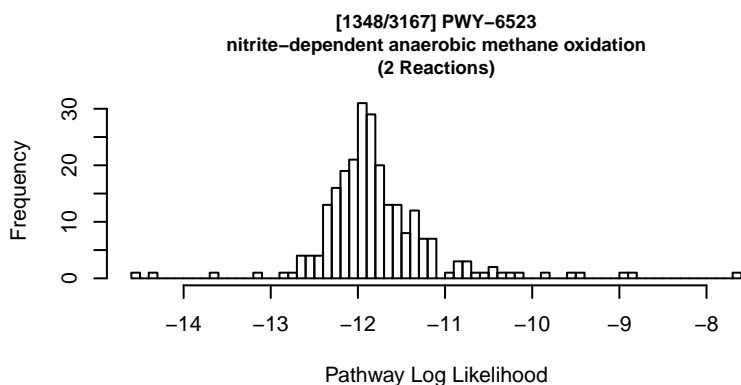
[1344/3167] PWY-6515
phloridzin biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.



[1347/3167] PWY-6520
nonaprenyl diphosphate biosynthesis II
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

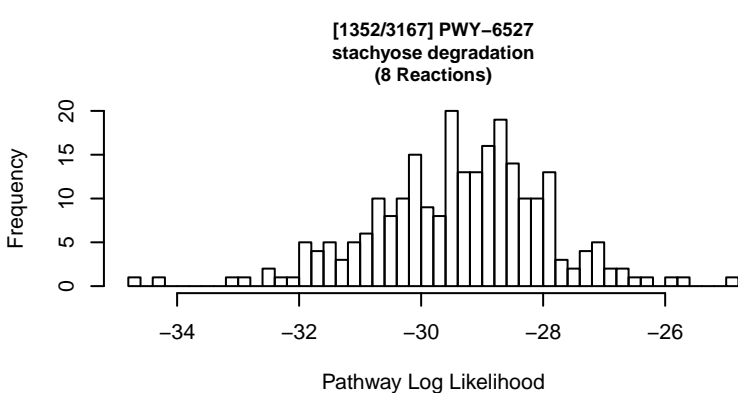
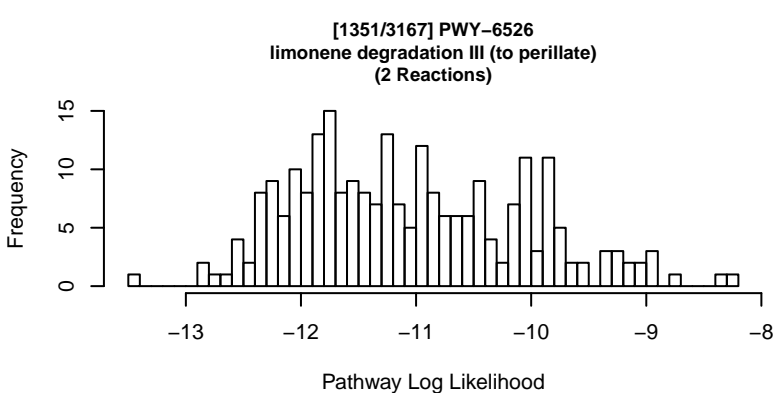


[1349/3167] PWY-6524
lychnose and isolychnose biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1350/3167] PWY-6525
stellariose and mediose biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

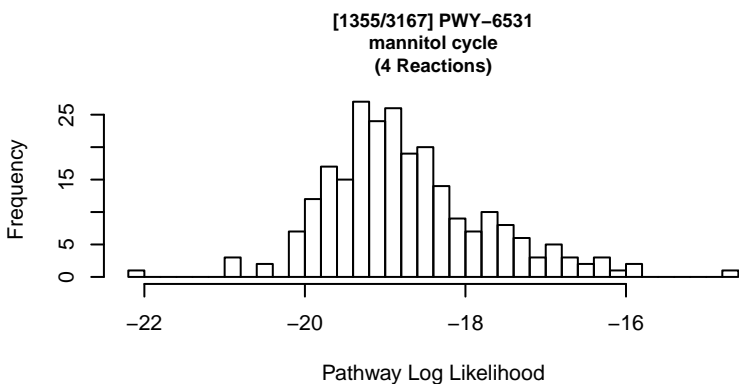


[1353/3167] PWY-6529
chlorate reduction
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1354/3167] PWY-6530
perchlorate reduction
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

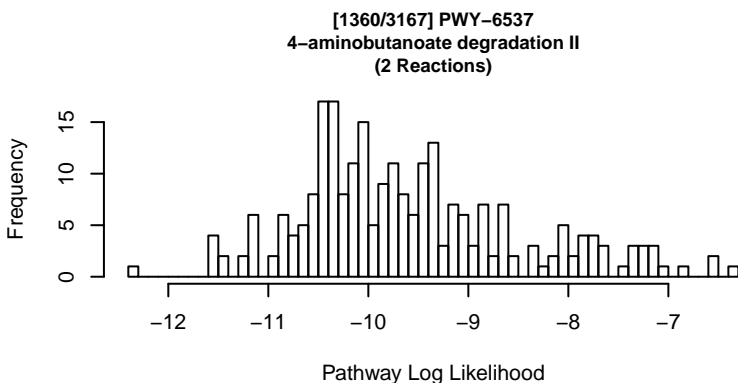
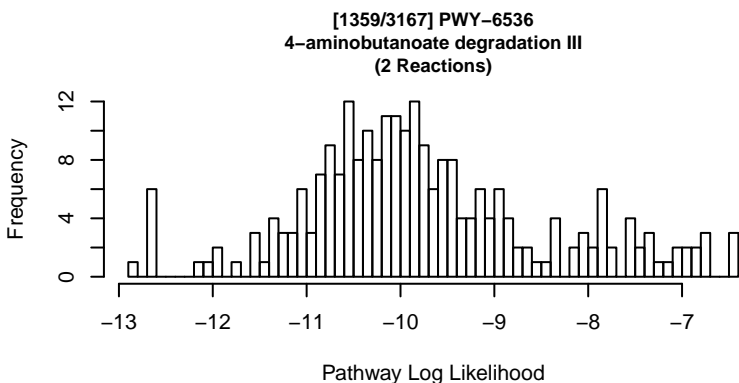
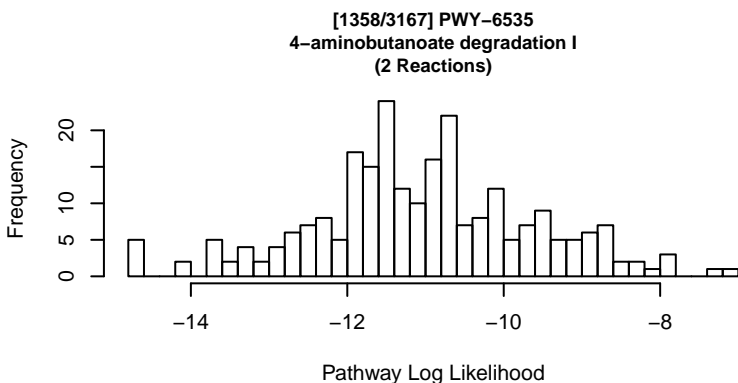


[1356/3167] PWY-6533
aniline degradation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1357/3167] PWY-6534
phenylethylamine degradation II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[1361/3167] PWY-6538
caffeine degradation III (bacteria, via demethylation)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

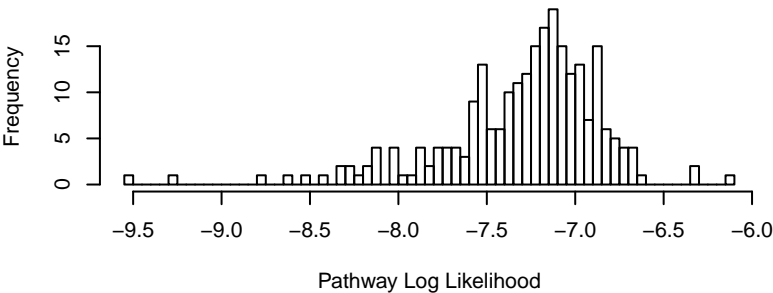
[1362/3167] PWY-6539
(*Z*)-phenylmethanethial *S*-oxide biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

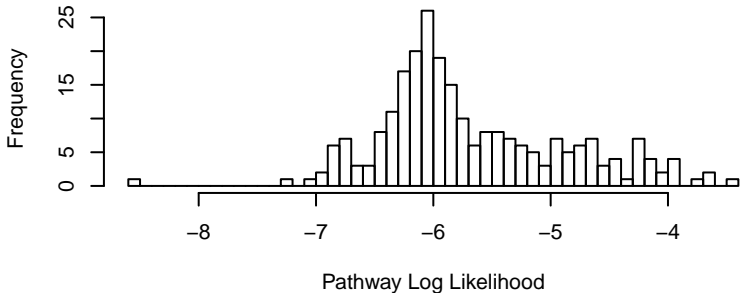
[1363/3167] PWY-6540
costunolide biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1364/3167] PWY-6543
4-aminobenzoate biosynthesis I
(2 Reactions)



[1365/3167] PWY-6544
superpathway of C28 brassinosteroid biosynthesis
(1 Reactions)



[1366/3167] PWY-6545
pyrimidine deoxyribonucleotides *de novo* biosynthesis III
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

[1367/3167] PWY-6546
brassinosteroids inactivation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1368/3167] PWY-6549
nitrogen remobilization from senescing leaves
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[1369/3167] PWY-6550
carbazole degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

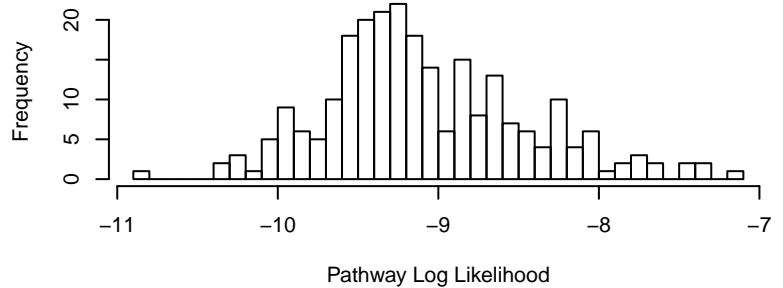
[1370/3167] PWY-6552
caffeine degradation I (main, plants)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1371/3167] PWY-6554
1D-*myo*-inositol hexakisphosphate biosynthesis V (from Ins(1,3,4)P3)
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1372/3167] PWY-6556
pyrimidine ribonucleosides salvage II
(2 Reactions)



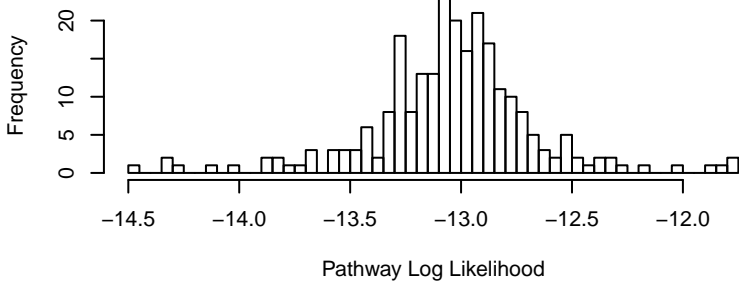
[1373/3167] PWY-6557
glycosaminoglycan-protein linkage region biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

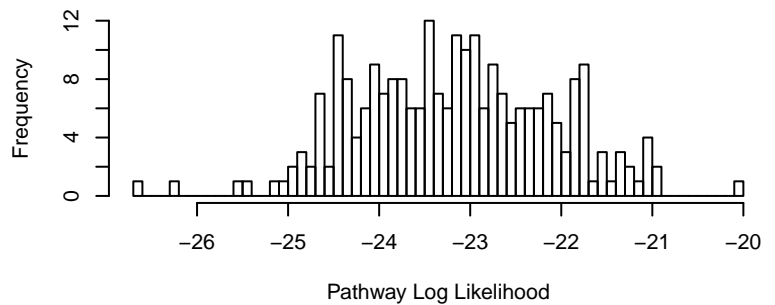
[1374/3167] PWY-6558
heparan sulfate biosynthesis
(10 Reactions)

Missing 6 Reaction(s) from Pathway.

[1375/3167] PWY-6559
spermidine biosynthesis II
(4 Reactions)



[1376/3167] PWY-6562
norspermidine biosynthesis
(6 Reactions)



[1377/3167] PWY-6566
chondroitin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1378/3167] PWY-6567
chondroitin sulfate biosynthesis
(4 Reactions)

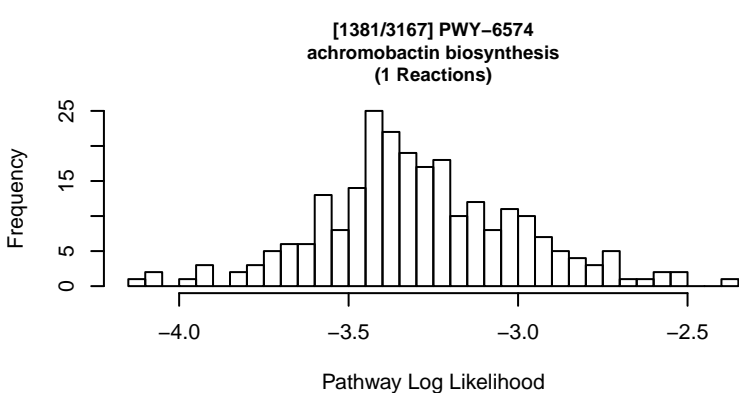
Missing 3 Reaction(s) from Pathway.

[1379/3167] PWY-6568
dermatan sulfate biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1380/3167] PWY-6572
chondroitin sulfate degradation I (bacterial)
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

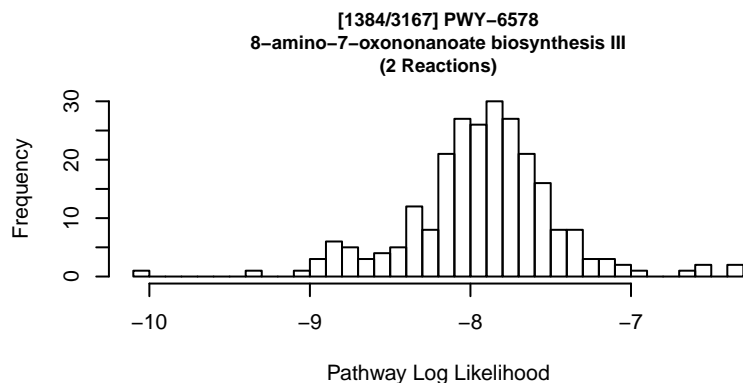


[1382/3167] PWY-6575
juvenile hormone III biosynthesis I
(6 Reactions)

Missing 5 Reaction(s) from Pathway.

[1383/3167] PWY-6577
farnesylcysteine salvage pathway
(4 Reactions)

Missing ALL Reaction(s) from Pathway.



[1385/3167] PWY-6580
phosphatidylinositol biosynthesis I (bacteria)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1386/3167] PWY-6581
spirilloxanthin and 2,2'-diketo-spirilloxanthin biosynthesis
(4 Reactions)

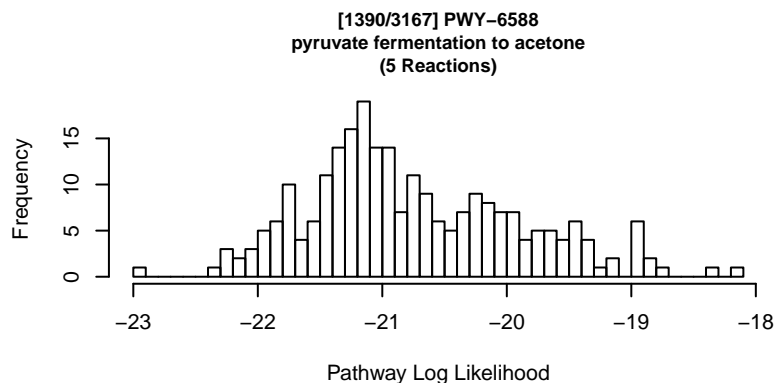
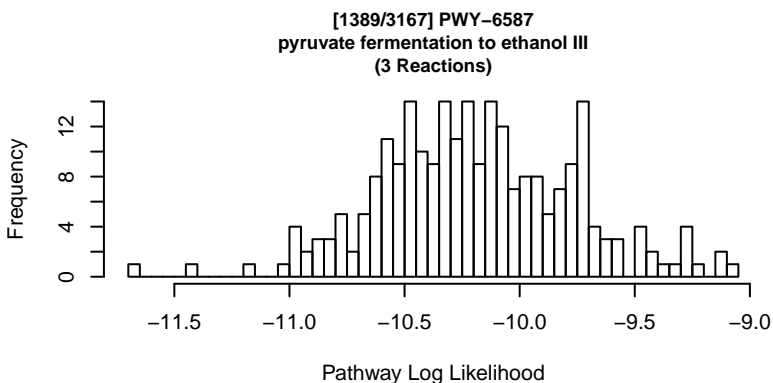
Missing 3 Reaction(s) from Pathway.

[1387/3167] PWY-6583
pyruvate fermentation to butanol I
(9 Reactions)

Missing 2 Reaction(s) from Pathway.

[1388/3167] PWY-6585
2-methylketone biosynthesis
(2 Reactions)

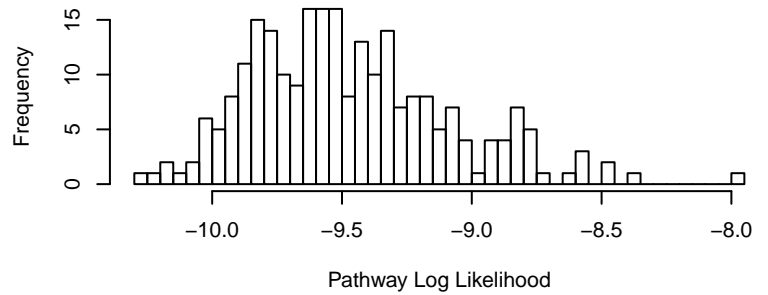
Missing 1 Reaction(s) from Pathway.



[1391/3167] PWY-6591
manganese oxidation I
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1392/3167] PWY-6593
sulfoacetate degradation
(2 Reactions)



[1393/3167] PWY-6594
superpathway of *Clostridium acetobutylicum* solventogenic fermentation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

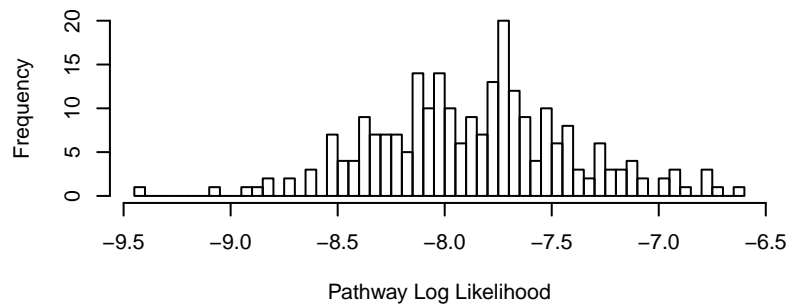
[1394/3167] PWY-6596
adenosine nucleotides degradation I
(8 Reactions)

Missing 3 Reaction(s) from Pathway.

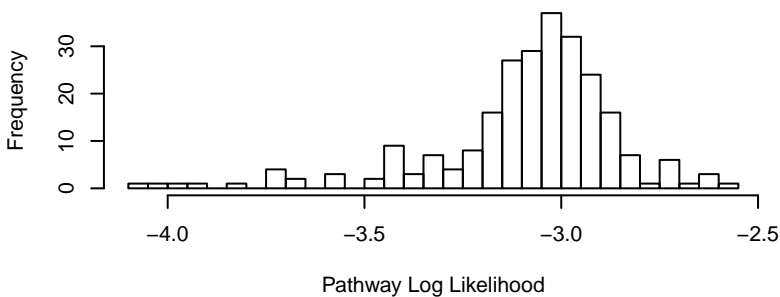
[1395/3167] PWY-6598
sciadonate biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[1396/3167] PWY-6599
guanine and guanosine salvage II
(2 Reactions)



[1397/3167] PWY-66
GDP-L-fucose biosynthesis I (from GDP-D-mannose)
(1 Reactions)



[1398/3167] PWY-6602
naringenin *C*-glucosylation
(3 Reactions)

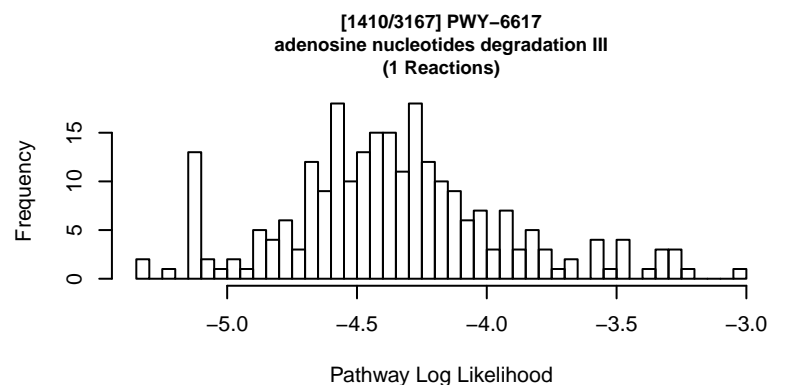
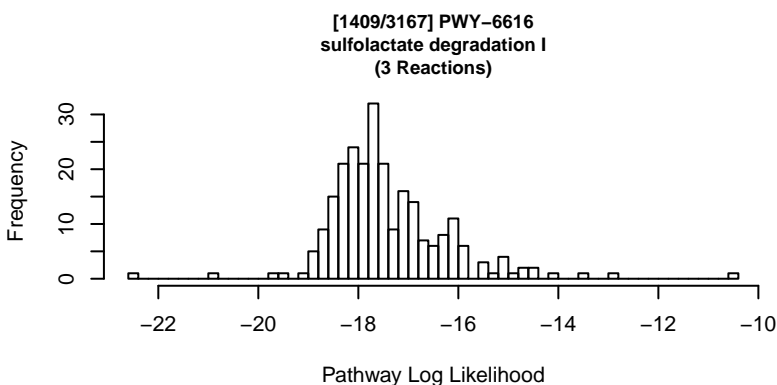
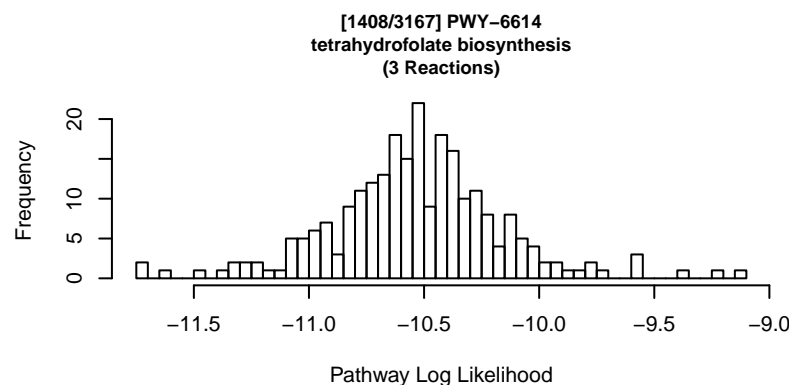
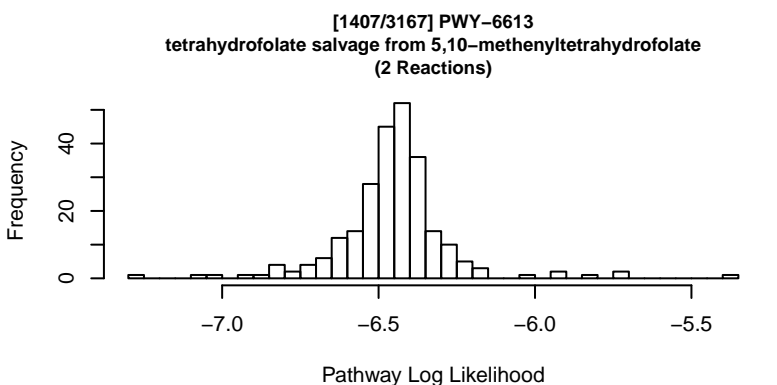
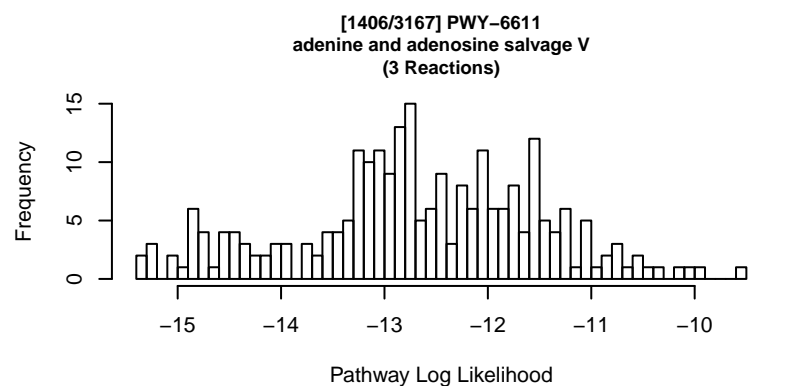
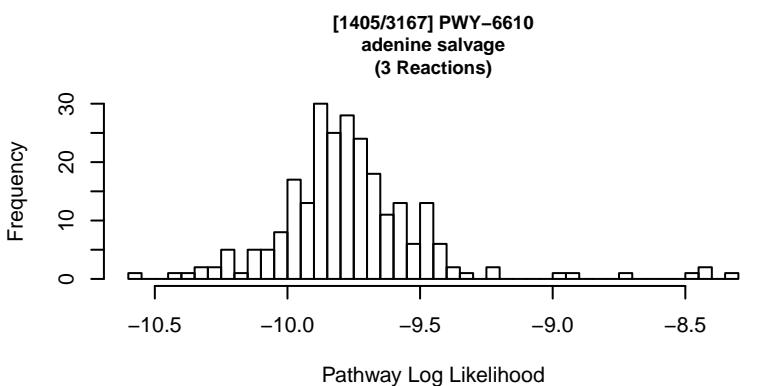
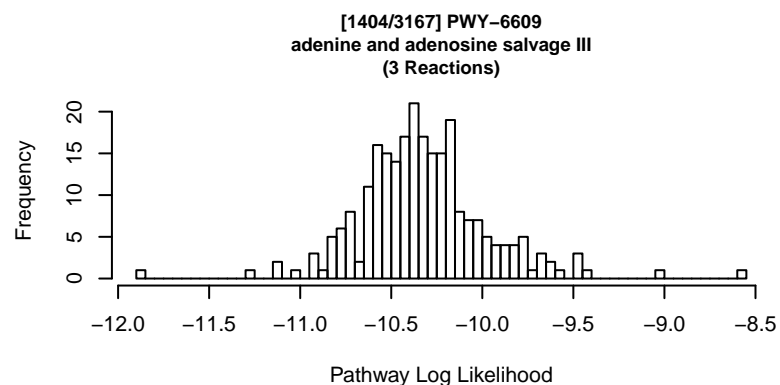
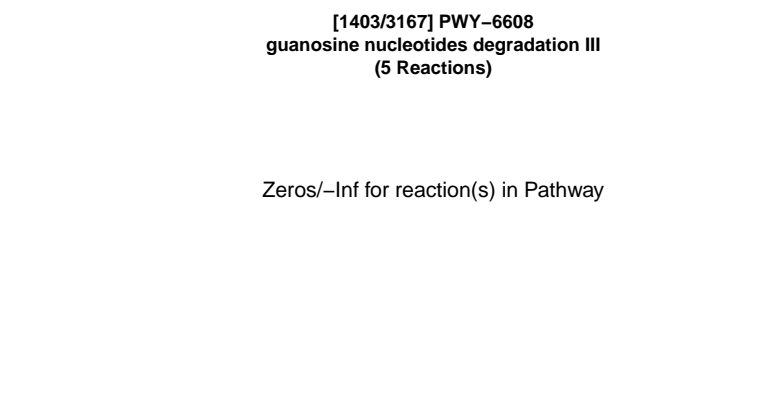
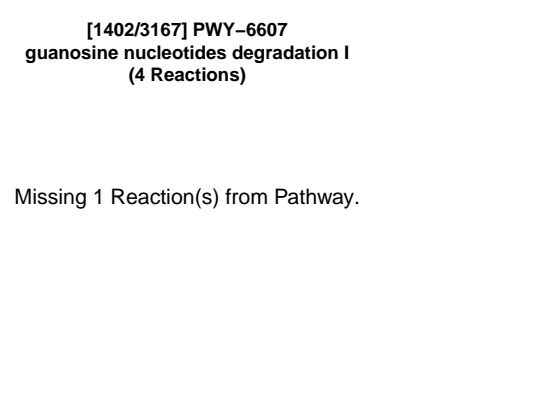
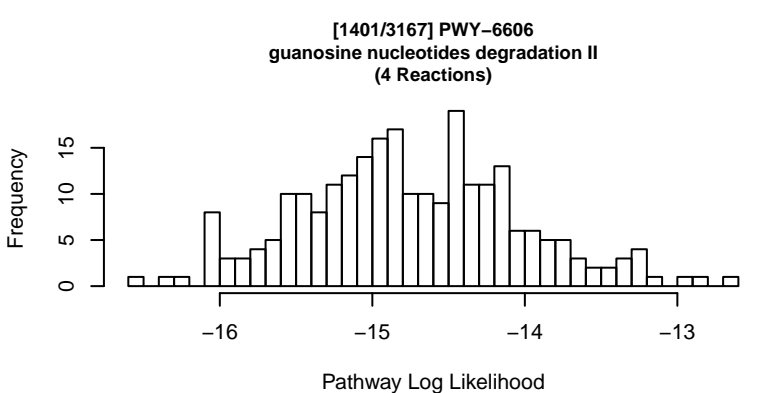
Missing ALL Reaction(s) from Pathway.

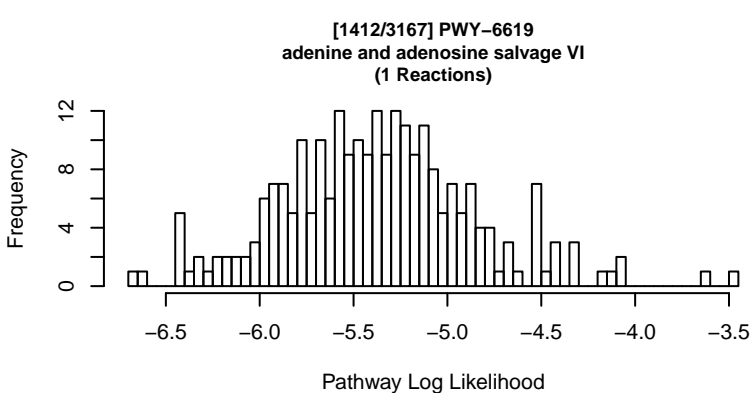
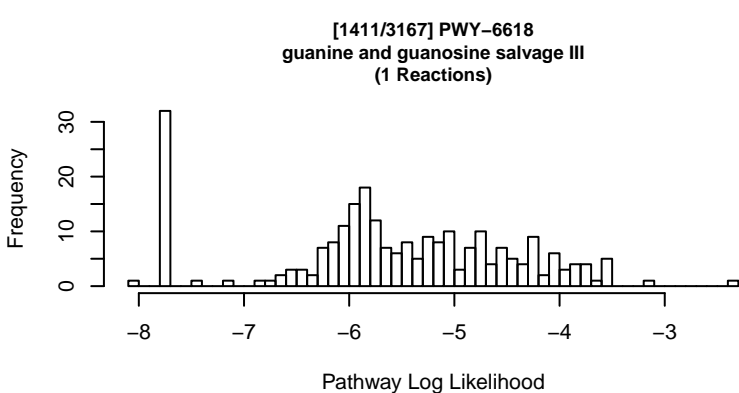
[1399/3167] PWY-6603
dicranin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1400/3167] PWY-6605
adenine and adenosine salvage II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.





[1413/3167] PWY-6620
guanine and guanosine salvage I
(3 Reactions)

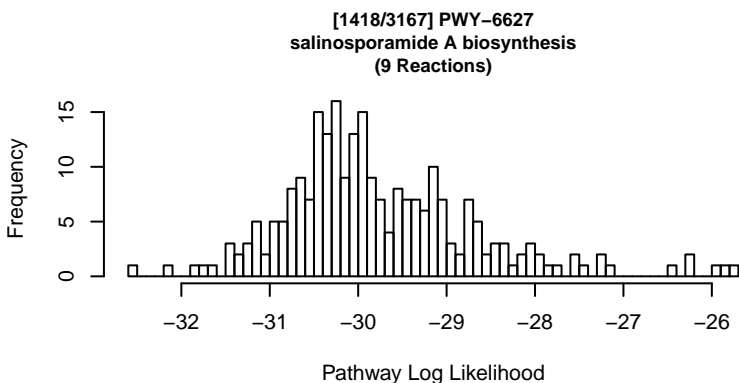
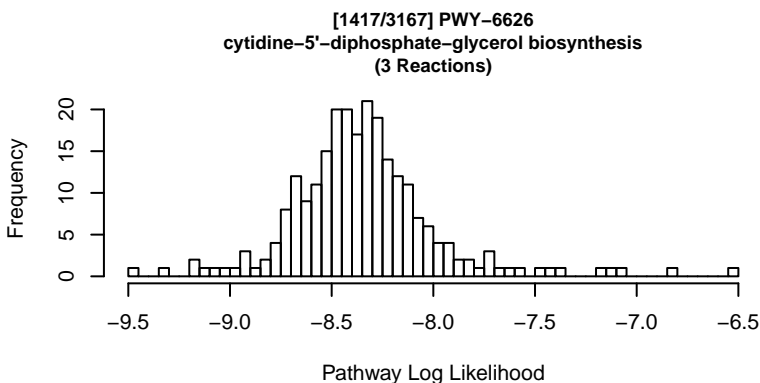
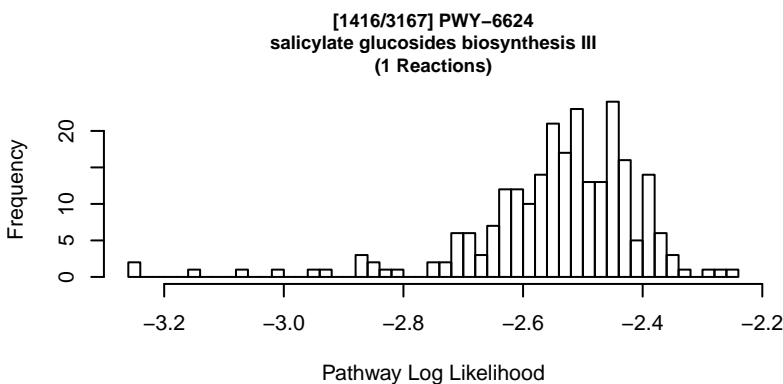
Zeros/-Inf for reaction(s) in Pathway

[1414/3167] PWY-6622
heptadecane biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

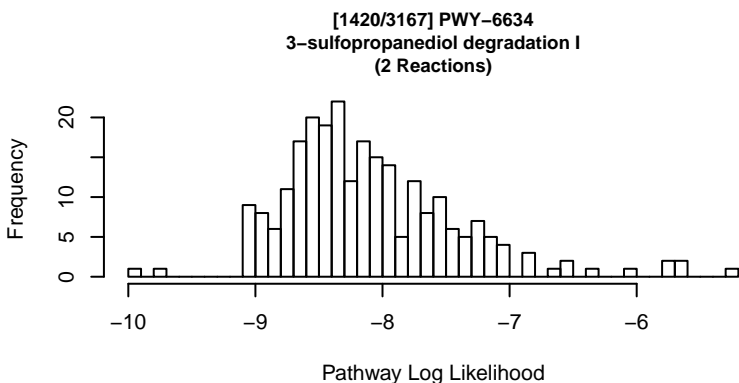
[1415/3167] PWY-6623
salicylate glucosides biosynthesis II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[1419/3167] PWY-6633
caffeine degradation V (bacteria, via trimethylurate)
(4 Reactions)

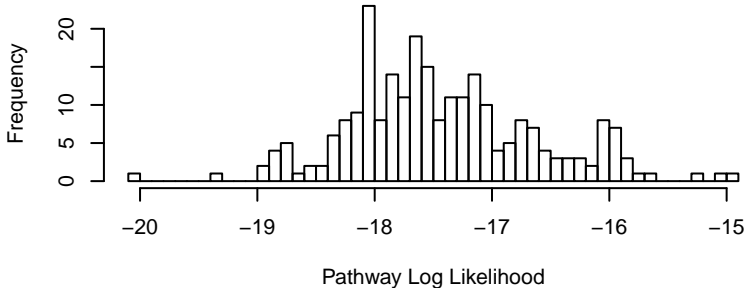
Missing 1 Reaction(s) from Pathway.



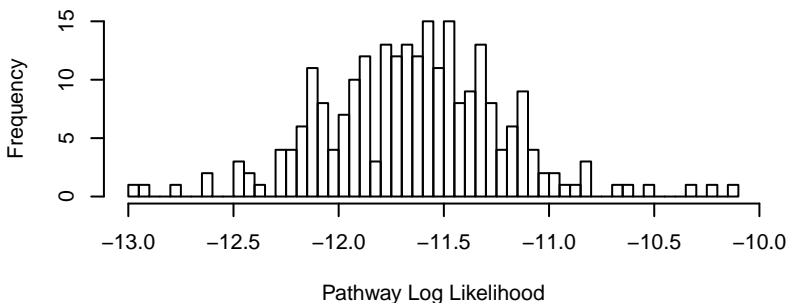
[1421/3167] PWY-6636
salicylate degradation III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1422/3167] PWY-6637
sulfolactate degradation II
(4 Reactions)



[1423/3167] PWY-6638
sulfolactate degradation III
(3 Reactions)



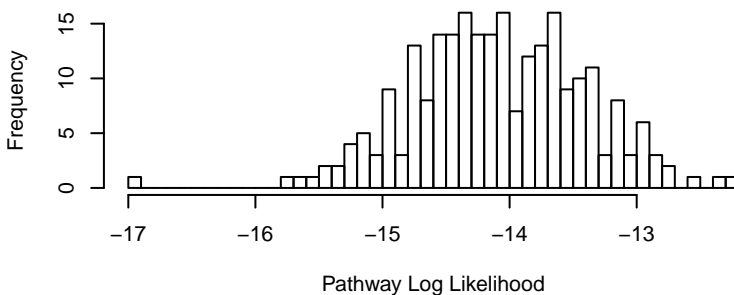
[1424/3167] PWY-6640
salicylate degradation IV
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1425/3167] PWY-6642
(*<i>R</i>*)-cysteate degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1426/3167] PWY-6643
coenzyme M biosynthesis II
(3 Reactions)



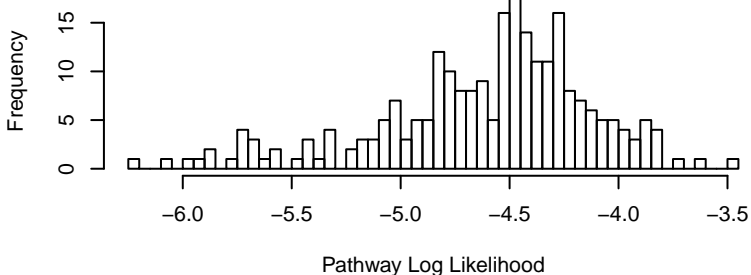
[1427/3167] PWY-6644
fluoroacetate and fluorothreonine biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1428/3167] PWY-6645
labdane-type diterpenes biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1429/3167] PWY-6646
fluoroacetate degradation
(1 Reactions)



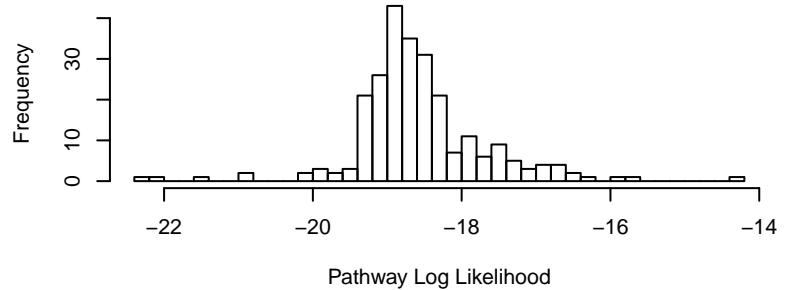
[1430/3167] PWY-6649
glycolate and glyoxylate degradation III
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1431/3167] PWY-6650
juvenile hormone III biosynthesis II
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

[1432/3167] PWY-6654
phosphopantothenate biosynthesis III (archaea)
(4 Reactions)



[1433/3167] PWY-6655
xanthan biosynthesis
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[1434/3167] PWY-6657
polyhydroxydecanoate biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1435/3167] PWY-6658
acetan biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1436/3167] PWY-6659
fusicoccin A biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[1437/3167] PWY-6660
2-heptyl-3-hydroxy-4(1*H*)-quinolone biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1438/3167] PWY-6661
4-hydroxy-2(1*H*)-quinolone biosynthesis
(2 Reactions)

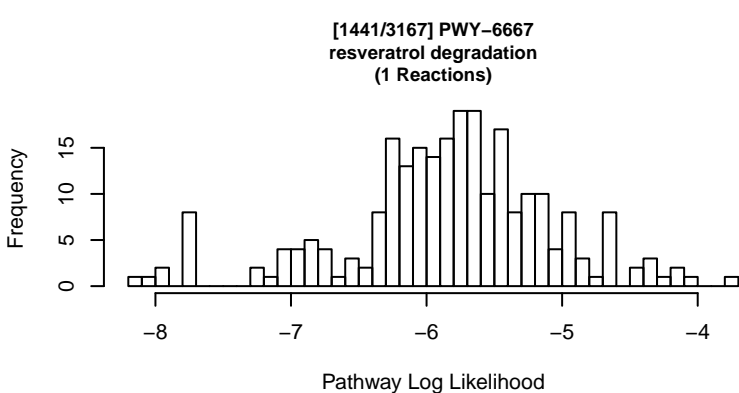
Zeros/-Inf for reaction(s) in Pathway

[1439/3167] PWY-6664
di-myo-inositol phosphate biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1440/3167] PWY-6666
pyocyanin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

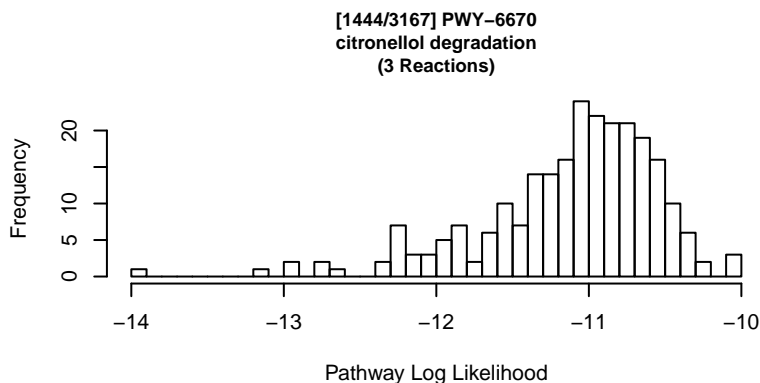


[1442/3167] PWY-6668
(*E,E*)-4,8,12-trimethyltrideca-1,3,7,11-tetraene biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1443/3167] PWY-6669
δ-guaiene biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[1445/3167] PWY-6672
<i>cis</i>-geranyl-CoA degradation
(8 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1446/3167] PWY-6673
caffeoylglucarate biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1447/3167] PWY-6675
sulfur oxidation IV (intracellular sulfur)
(2 Reactions)

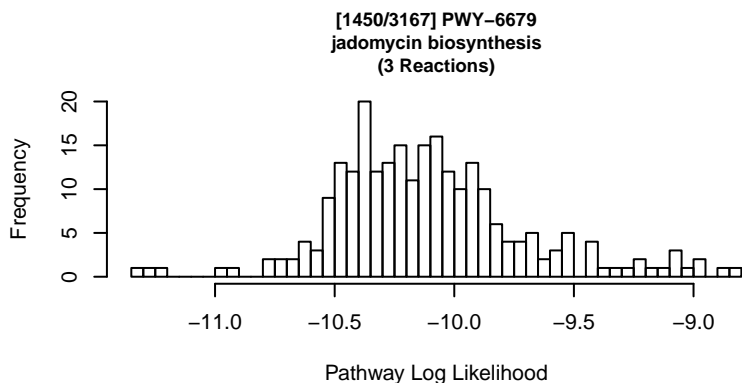
Missing 1 Reaction(s) from Pathway.

[1448/3167] PWY-6677
thiosulfate oxidation IV (multienzyme complex)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1449/3167] PWY-6678
geraniol and nerol degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



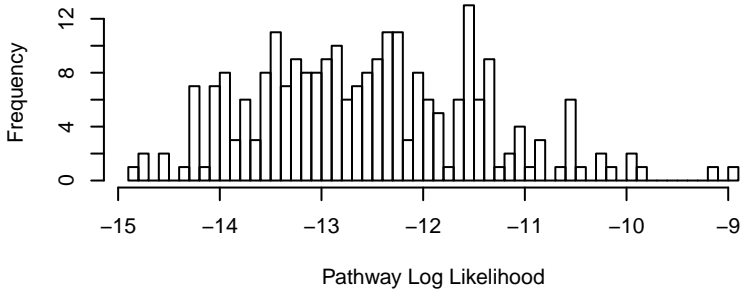
[1451/3167] PWY-6681
neurosporaxanthin biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1452/3167] PWY-6682
dehydrophos biosynthesis
(10 Reactions)

Missing 1 Reaction(s) from Pathway.

[1453/3167] PWY-6683
assimilatory sulfate reduction III
(3 Reactions)



[1454/3167] PWY-6684
aromatic glucosinolate activation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1455/3167] PWY-6685
glucosylglycerate biosynthesis II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1456/3167] PWY-6686
mannosylglucosylglycerate biosynthesis I
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

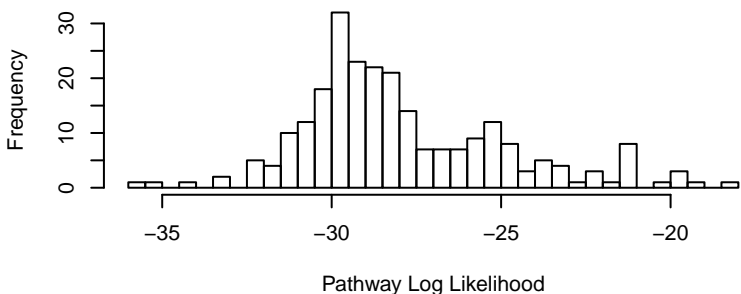
[1457/3167] PWY-6687
mannosylglucosylglycerate biosynthesis II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1458/3167] PWY-6689
tRNA splicing I
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1459/3167] PWY-6690
cinnamate and 3-hydroxycinnamate degradation to 2-hydroxypentadienoate
(5 Reactions)



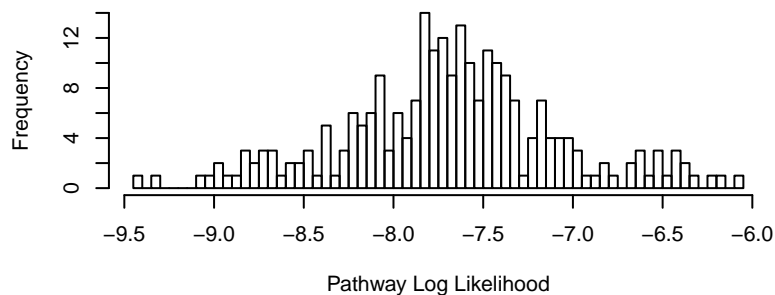
[1460/3167] PWY-6691
plaunotol biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1461/3167] PWY-6692
Fe(II) oxidation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1462/3167] PWY-6693
D-galactose degradation IV
(2 Reactions)



[1463/3167] PWY-6694
oxalate degradation I
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1464/3167] PWY-6695
oxalate degradation II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

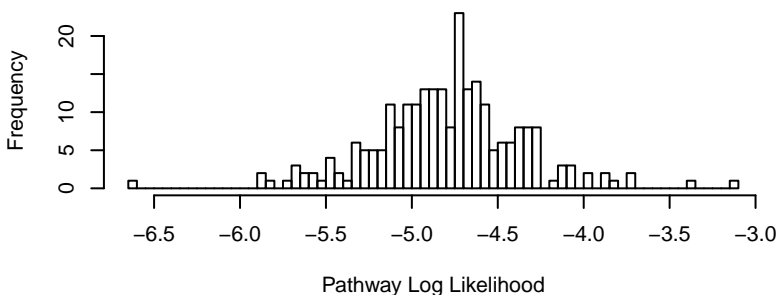
[1465/3167] PWY-6696
oxalate degradation III
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1466/3167] PWY-6697
oxalate degradation IV
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

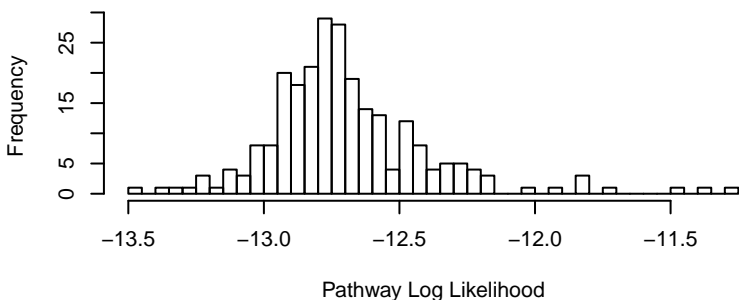
[1467/3167] PWY-6698
oxalate degradation V
(1 Reactions)



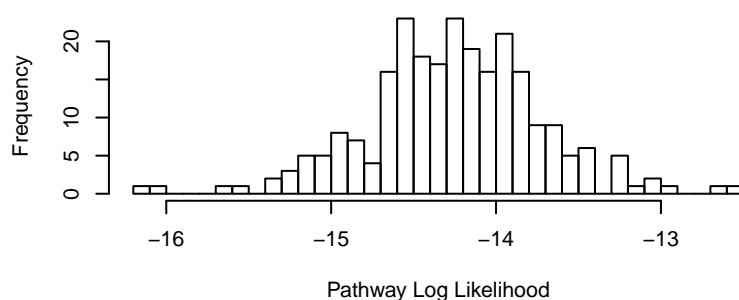
[1468/3167] PWY-6699
oxalate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1469/3167] PWY-6700
queuosine biosynthesis I (<i>de novo</i>)
(4 Reactions)



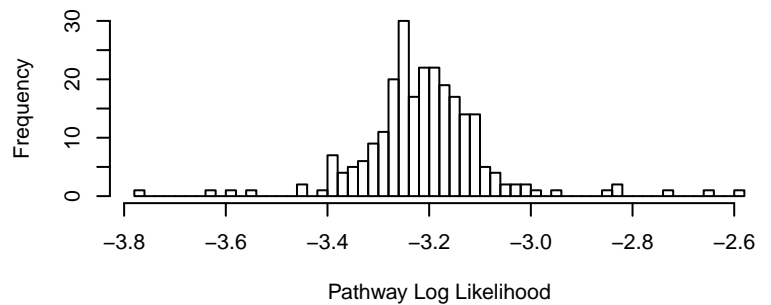
[1470/3167] PWY-6703
preQ₀ biosynthesis
(4 Reactions)



[1471/3167] PWY-6704
L-ascorbate degradation IV
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1472/3167] PWY-6707
gallate biosynthesis
(1 Reactions)



[1473/3167] PWY-6708
ubiquinol-8 biosynthesis (early decarboxylation)
(8 Reactions)

Missing 2 Reaction(s) from Pathway.

[1474/3167] PWY-6710
poly-hydroxy fatty acids biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1475/3167] PWY-6711
archaeosine biosynthesis I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

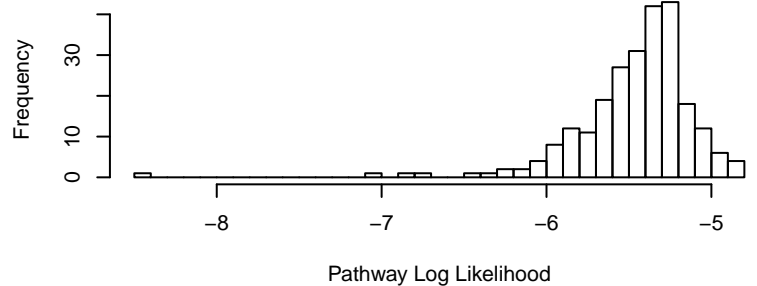
[1476/3167] PWY-6713
L-rhamnose degradation II
(7 Reactions)

Zeros/-Inf for reaction(s) in Pathway

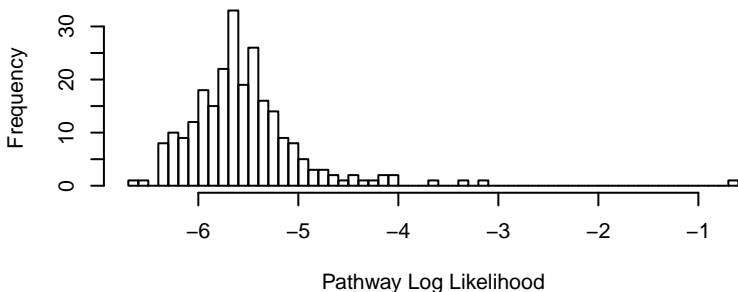
[1477/3167] PWY-6714
L-rhamnose degradation III
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1478/3167] PWY-6717
(1,4)- β -D-xylan degradation
(2 Reactions)

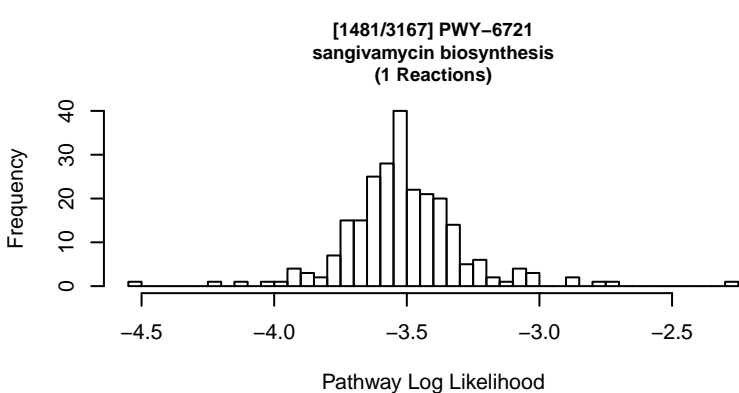


[1479/3167] PWY-6718
sulfoacetaldehyde degradation III
(1 Reactions)



[1480/3167] PWY-6720
toyocamycin biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



[1482/3167] PWY-6722
candididin biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1483/3167] PWY-6724
starch degradation II
(6 Reactions)

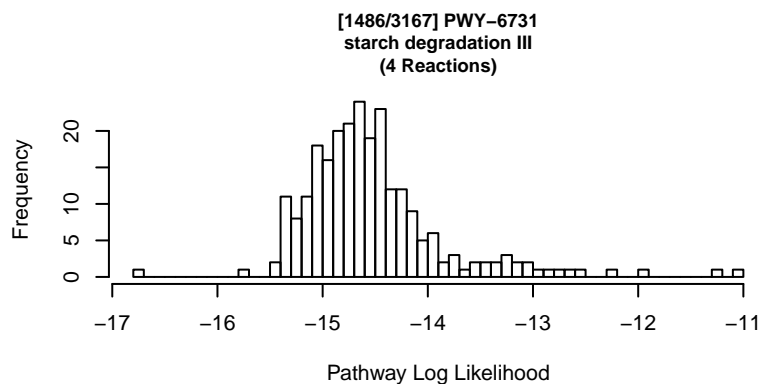
Missing 2 Reaction(s) from Pathway.

[1484/3167] PWY-6728
methylaspartate cycle
(17 Reactions)

Missing 1 Reaction(s) from Pathway.

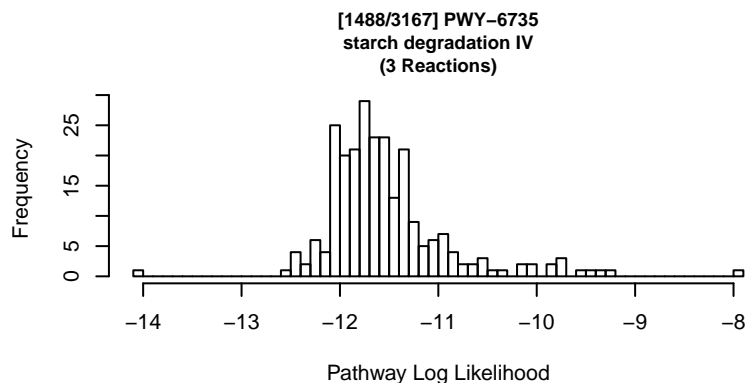
[1485/3167] PWY-6730
methylhalides biosynthesis (plants)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



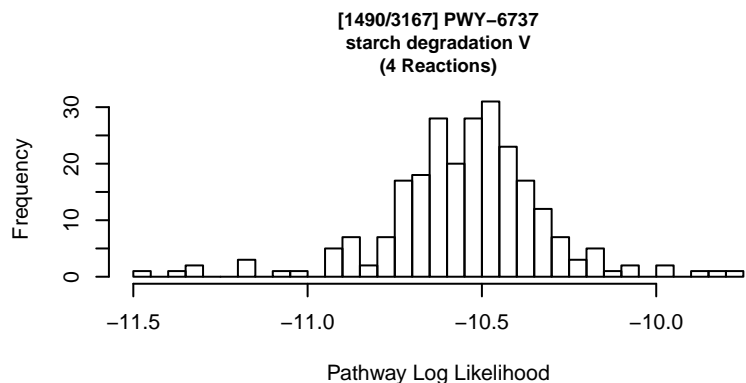
[1487/3167] PWY-6733
sporopollenin precursors biosynthesis
(6 Reactions)

Missing 2 Reaction(s) from Pathway.



[1489/3167] PWY-6736
sulfur volatiles biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[1491/3167] PWY-6738
pinitol biosynthesis I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1492/3167] PWY-6739
pinitol biosynthesis II
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

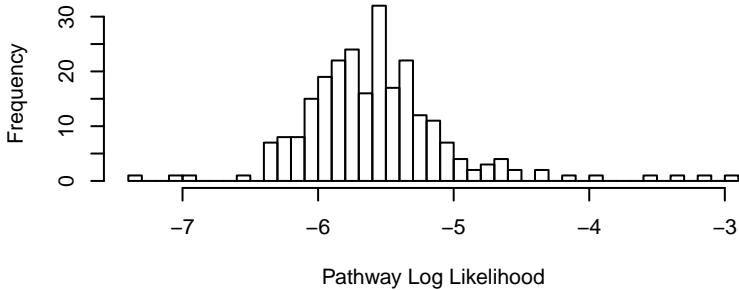
[1493/3167] PWY-6742
methane oxidation to methanol II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1494/3167] PWY-6744
hydrogen production I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

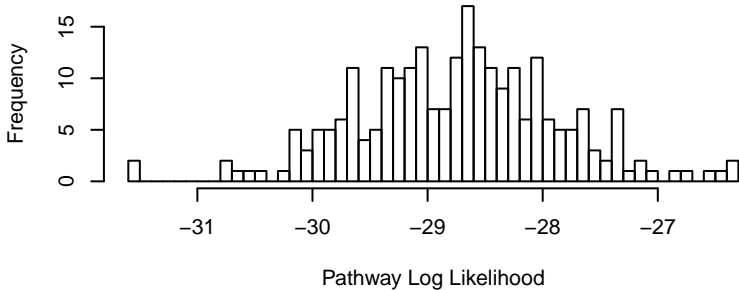
[1495/3167] PWY-6745
phytochelatins biosynthesis
(1 Reactions)



[1496/3167] PWY-6748
nitrate reduction VII (denitrification)
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

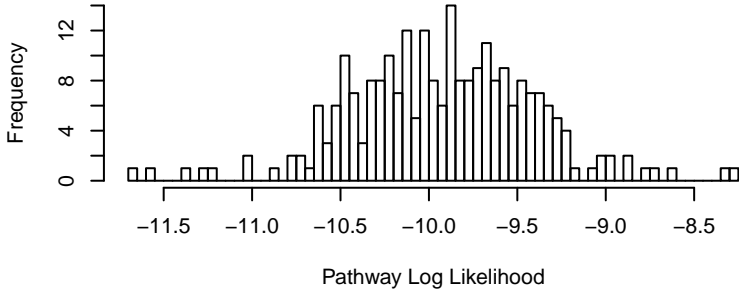
[1497/3167] PWY-6749
CMP-legionaminat biosynthesis I
(9 Reactions)



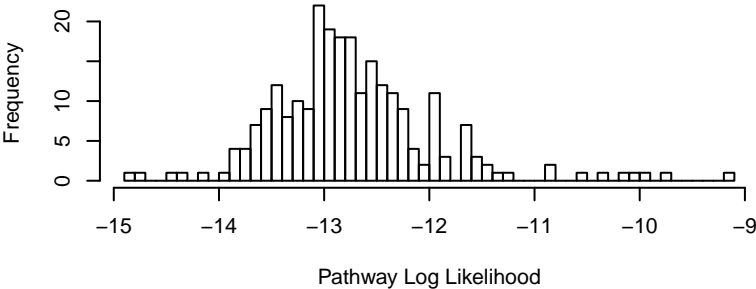
[1498/3167] PWY-6752
o-diquinones biosynthesis
(1 Reactions)

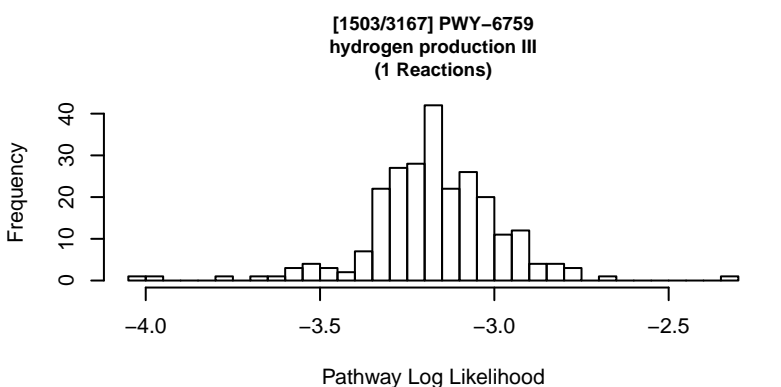
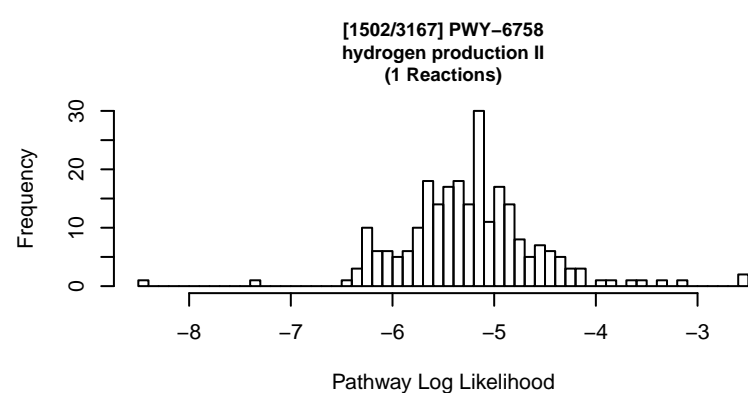
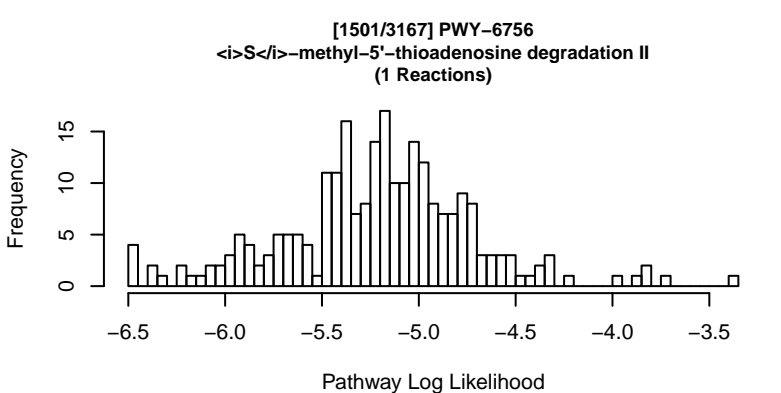
Missing ALL Reaction(s) from Pathway.

[1499/3167] PWY-6753
S-methyl-5'-thioadenosine degradation III
(2 Reactions)



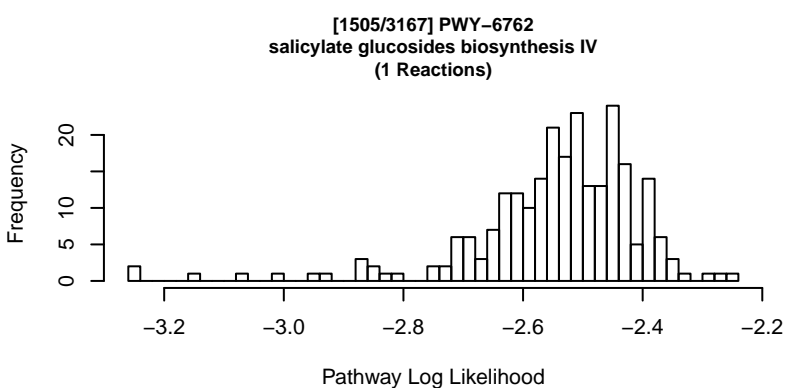
[1500/3167] PWY-6754
S-methyl-5'-thioadenosine degradation I
(3 Reactions)





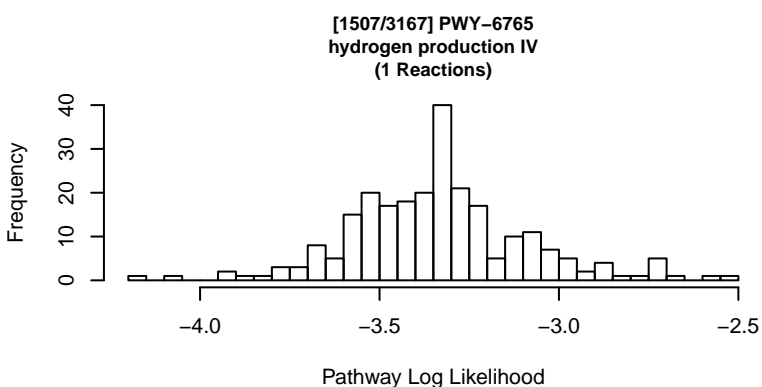
[1504/3167] PWY-6760
D-xylose degradation III
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



[1506/3167] PWY-6763
salicortin biosynthesis
(8 Reactions)

Missing 1 Reaction(s) from Pathway.



[1508/3167] PWY-6766
salicin biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1509/3167] PWY-6767
4,4'-diapolycopenedioate biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

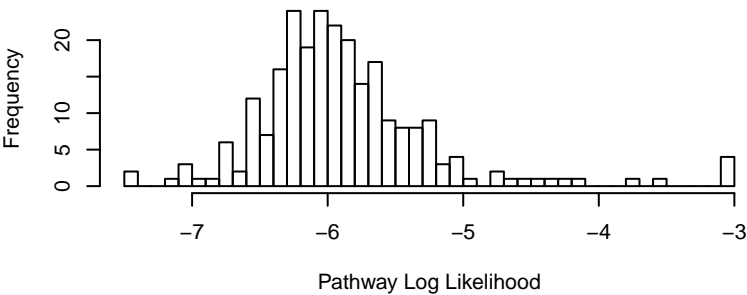
[1510/3167] PWY-6771
rhamnogalacturonan type I degradation II (bacteria)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1511/3167] PWY-6772
hydrogen production V
(2 Reactions)

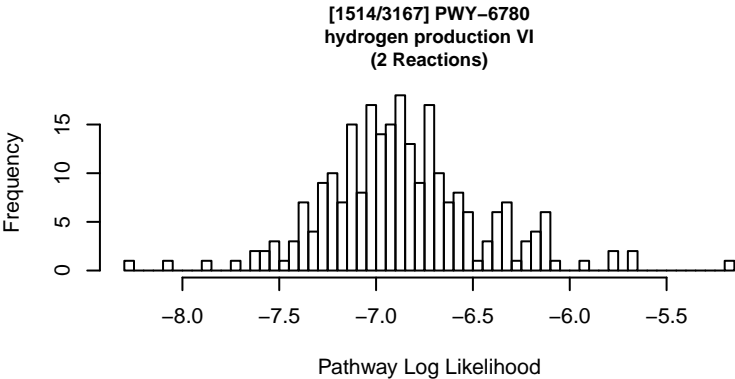
Missing ALL Reaction(s) from Pathway.

[1512/3167] PWY-6773
1,3-β-D-glucan biosynthesis
(1 Reactions)



[1513/3167] PWY-6778
laminaribiose degradation
(1 Reactions)

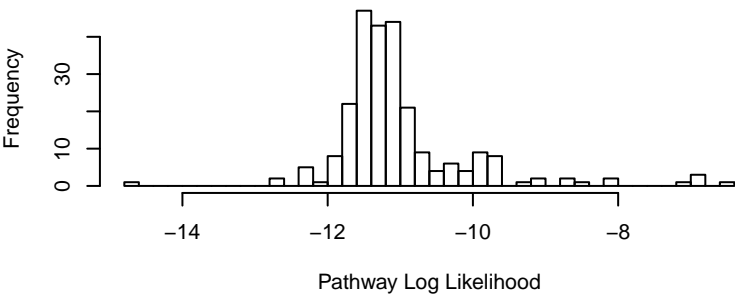
Zeros/-Inf for reaction(s) in Pathway



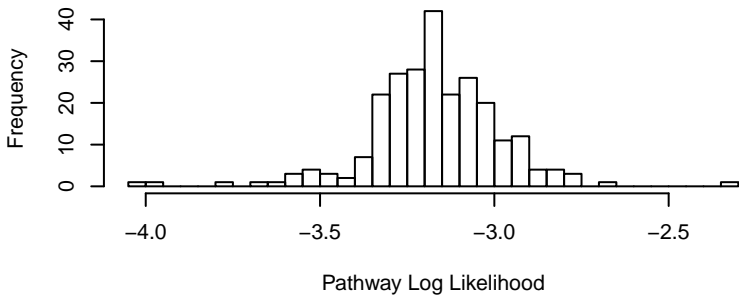
[1515/3167] PWY-6781
chlorogenic acid degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1516/3167] PWY-6784
cellulose and hemicellulose degradation (cellulosome)
(3 Reactions)



[1517/3167] PWY-6785
hydrogen production VIII
(1 Reactions)



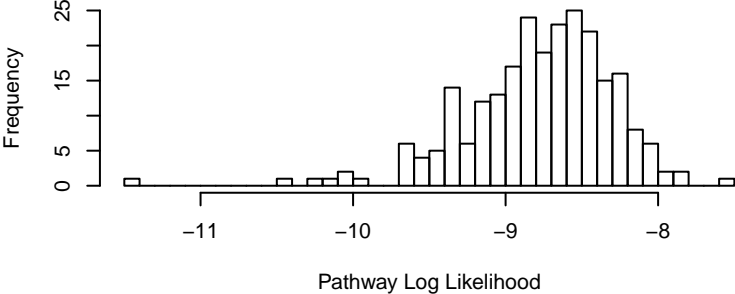
[1518/3167] PWY-6786
detoxification of reactive carbonyls in chloroplasts
(5 Reactions)

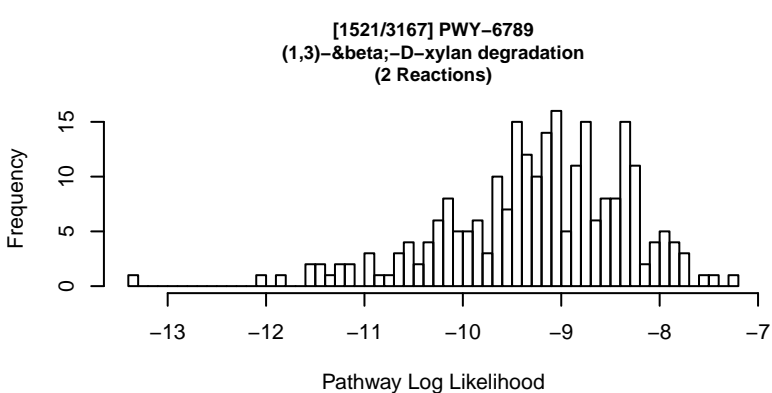
Missing 1 Reaction(s) from Pathway.

[1519/3167] PWY-6787
flavonoid biosynthesis (in equisetum)
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[1520/3167] PWY-6788
cellulose degradation II (fungi)
(3 Reactions)





[1522/3167] PWY-6792
scopoletin biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1523/3167] PWY-6794
adenosine 5'-phosphoramidate biosynthesis
(1 Reactions)

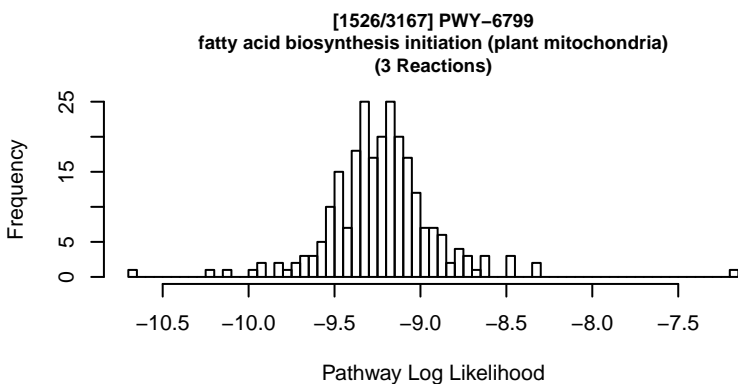
Missing ALL Reaction(s) from Pathway.

[1524/3167] PWY-6795
diacylglycerol-<i>N,N,N</i>-trimethylhomoserine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1525/3167] PWY-6797
6-hydroxymethyl-dihydropterin diphosphate biosynthesis II (<i>Methanocaldococcus</i>)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



[1527/3167] PWY-6801
volatile esters biosynthesis (during fruit ripening)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1528/3167] PWY-6802
salidroside biosynthesis
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1529/3167] PWY-6803
phosphatidylcholine acyl editing
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1530/3167] PWY-6804
diacylglycerol biosynthesis (PUFA enrichment in oilseed)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1531/3167] PWY-6806
carotenoid cleavage
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1532/3167] PWY-6807
xyloglucan degradation II (exoglucanase)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1533/3167] PWY-6808
dTDP- α -D-xylosamine biosynthesis
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1534/3167] PWY-6809
neoxanthin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1535/3167] PWY-681
dibenzothiophene desulfurization
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1536/3167] PWY-6812
xyloglucan degradation III (cellobiohydrolase)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1537/3167] PWY-6815
porphyran degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1538/3167] PWY-6816
agarose degradation
(2 Reactions)

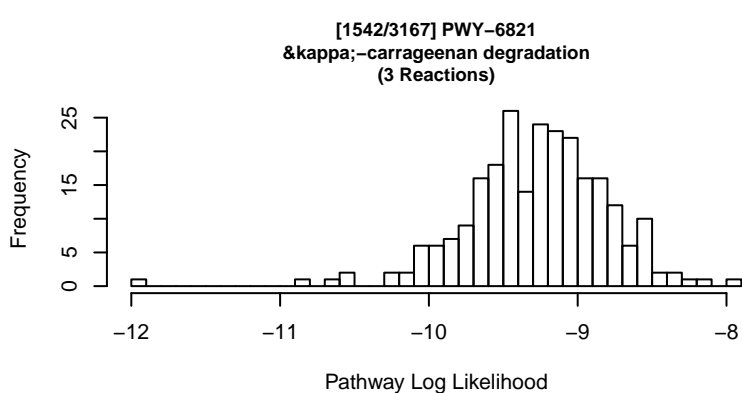
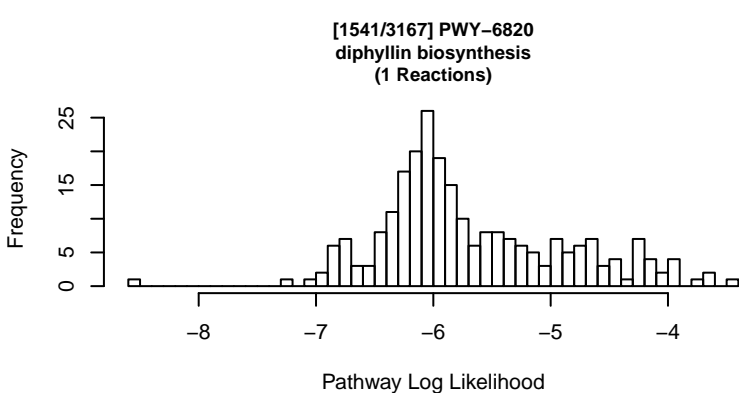
Missing 1 Reaction(s) from Pathway.

[1539/3167] PWY-6817
 λ -carrageenan degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

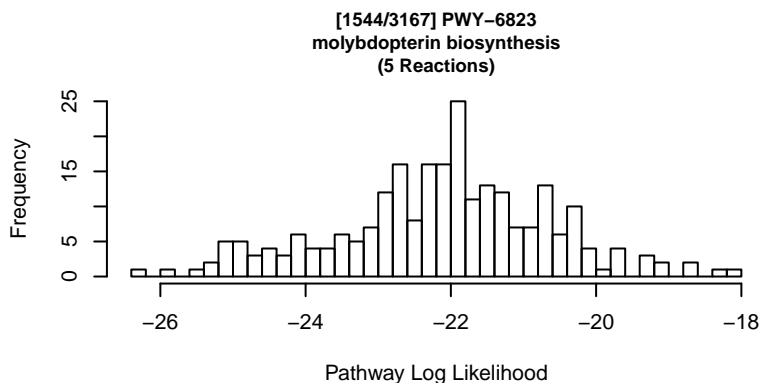
[1540/3167] PWY-6818
ornithine lipid biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[1543/3167] PWY-6822
ι-carrageenan degradation
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

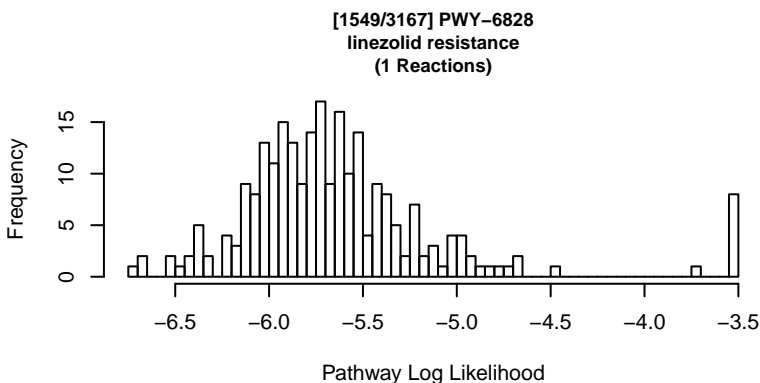
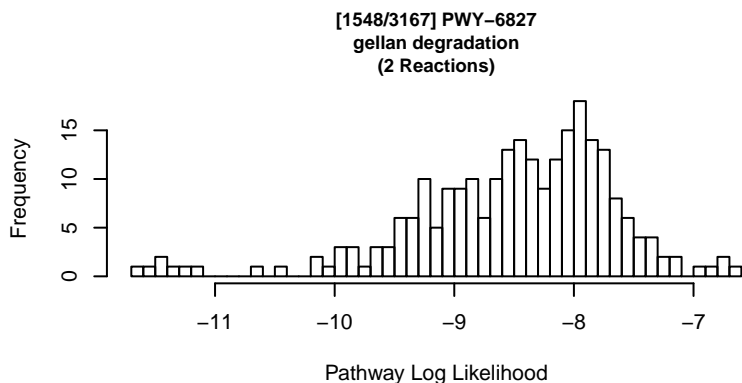
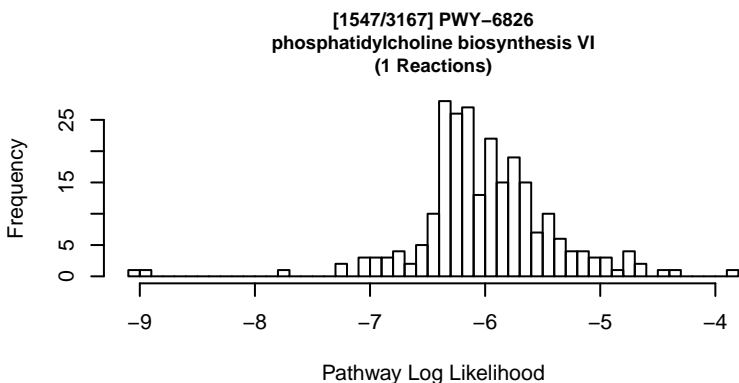


[1545/3167] PWY-6824
justicidin B biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[1546/3167] PWY-6825
phosphatidylcholine biosynthesis V
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



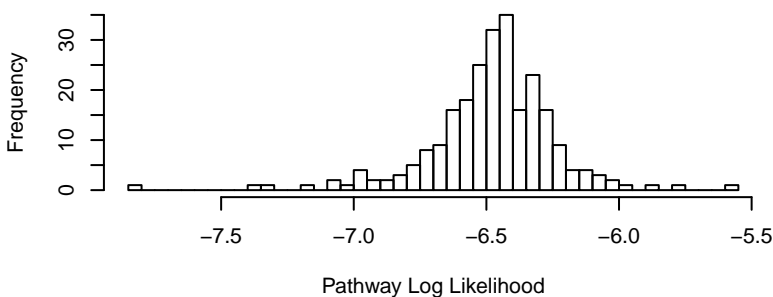
[1550/3167] PWY-6829
tRNA methylation (yeast)
(10 Reactions)

Missing 4 Reaction(s) from Pathway.

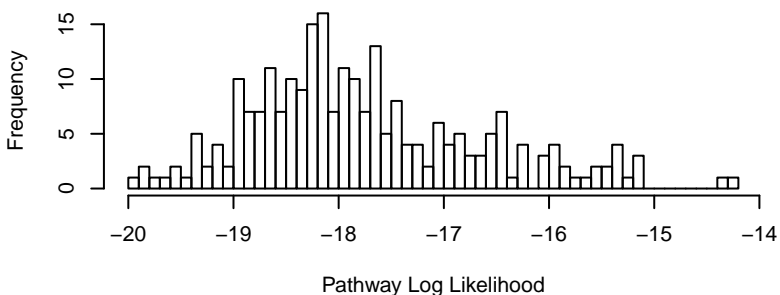
[1551/3167] PWY-6831
pyrrolnitrin biosynthesis
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

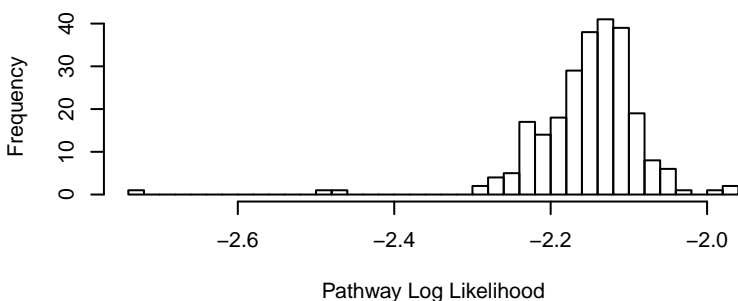
[1552/3167] PWY-6832
2-aminoethylphosphonate degradation II
(2 Reactions)



[1553/3167] PWY-6834
spermidine biosynthesis III
(4 Reactions)



[1554/3167] PWY-6835
6-geringol biosynthesis
(1 Reactions)



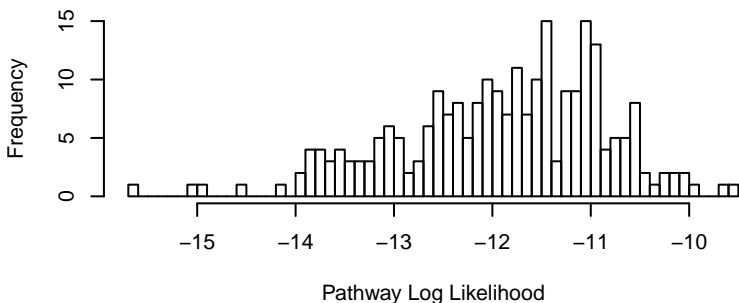
[1555/3167] PWY-6836
santalene biosynthesis II
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[1556/3167] PWY-6837
fatty acid β-oxidation V (unsaturated, odd number, di-isomerase-dependent)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

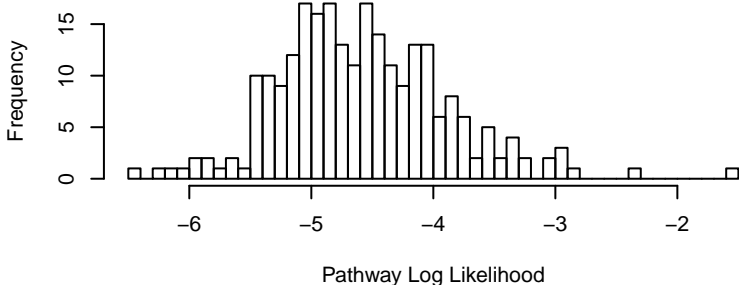
[1557/3167] PWY-6839
2-aminoethylphosphonate biosynthesis
(3 Reactions)



[1558/3167] PWY-6840
homogluthathione biosynthesis
(2 Reactions)

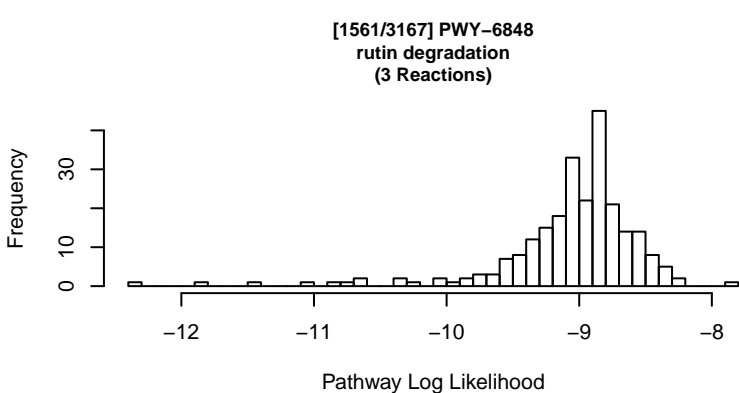
Missing 1 Reaction(s) from Pathway.

[1559/3167] PWY-6841
homophytochelatin biosynthesis
(1 Reactions)



[1560/3167] PWY-6842
glutathione-mediated detoxification II
(9 Reactions)

Missing 4 Reaction(s) from Pathway.



[1562/3167] PWY-6852
senecionine N-oxide biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1563/3167] PWY-6853
ethene biosynthesis II (microbes)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1564/3167] PWY-6854
ethene biosynthesis III (microbes)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1565/3167] PWY-6855
chitin degradation I (archaea)
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[1566/3167] PWY-6857
retinol biosynthesis
(5 Reactions)

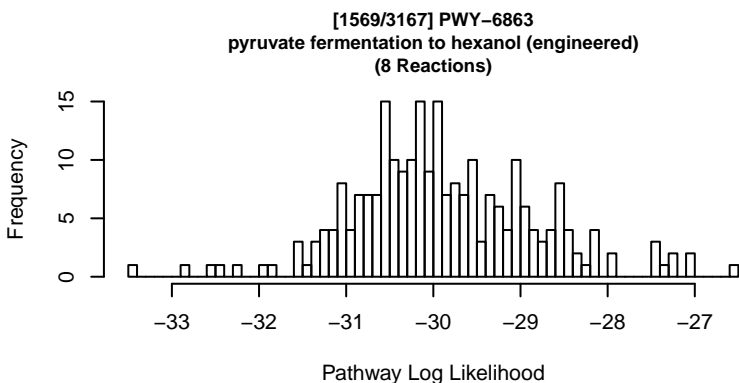
Missing 1 Reaction(s) from Pathway.

[1567/3167] PWY-6859
***all-trans*-farnesol biosynthesis**
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1568/3167] PWY-6861
the visual cycle I (vertebrates)
(4 Reactions)

Missing 3 Reaction(s) from Pathway.



[1570/3167] PWY-6871
3-methylbutanol biosynthesis (engineered)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

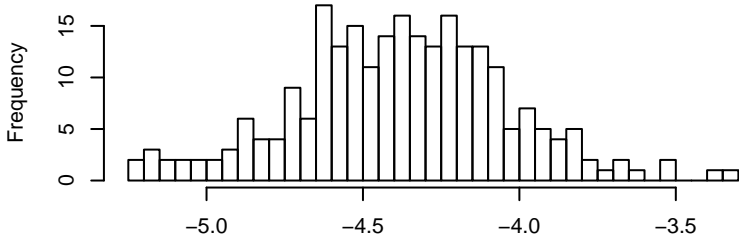
[1571/3167] PWY-6872
retinoate biosynthesis I
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1572/3167] PWY-6873
long chain fatty acid ester synthesis (engineered)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1573/3167] PWY-6875
retinoate biosynthesis II
(1 Reactions)



Pathway Log Likelihood

[1574/3167] PWY-6876
isopropanol biosynthesis (engineered)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1575/3167] PWY-6883
pyruvate fermentation to butanol II (engineered)
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[1576/3167] PWY-6886
1-butanol autotrophic biosynthesis (engineered)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

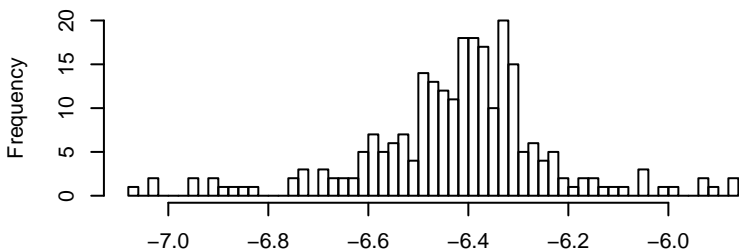
[1577/3167] PWY-6887
kaurealexin biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1578/3167] PWY-6888
zealexin biosynthesis
(2 Reactions)

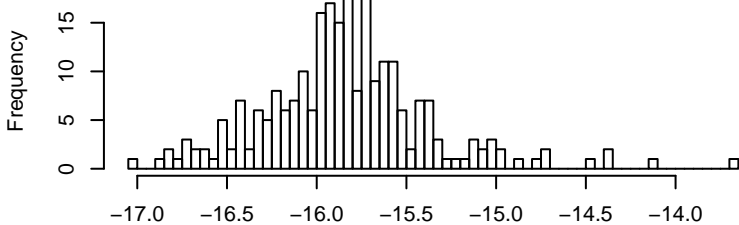
Missing ALL Reaction(s) from Pathway.

[1579/3167] PWY-6890
4-amino-2-methyl-5-diphosphomethylpyrimidine biosynthesis I
(2 Reactions)

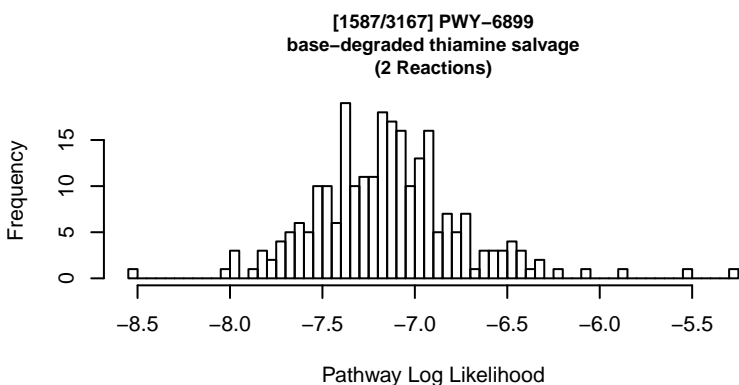
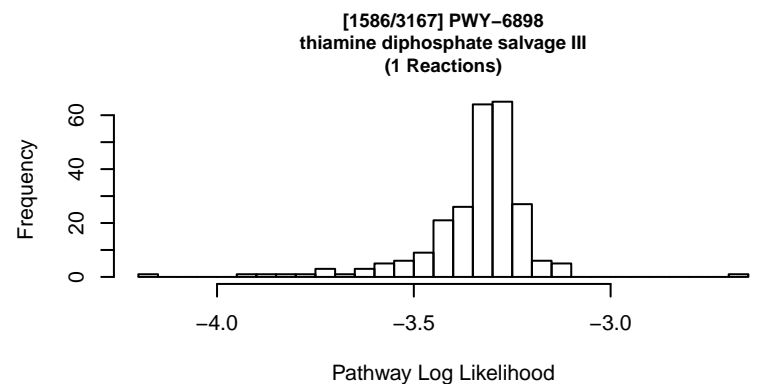
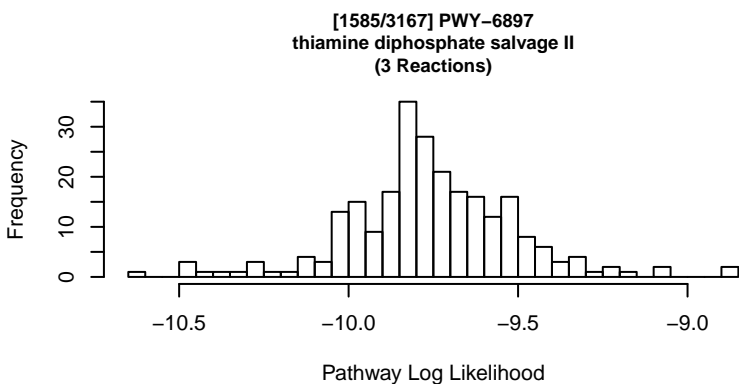
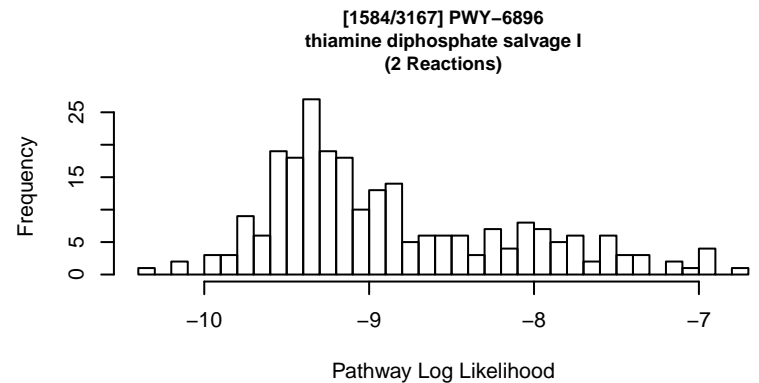
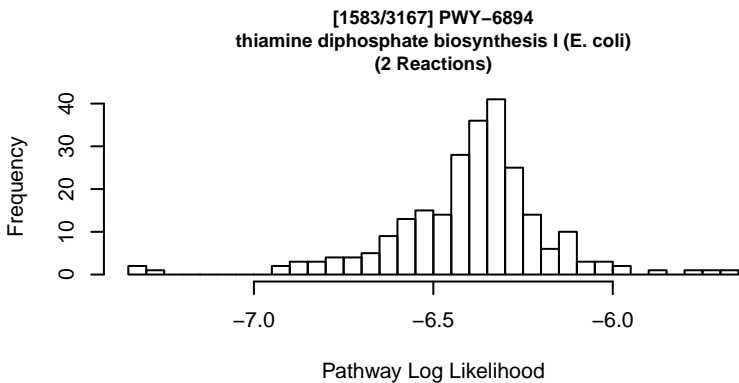
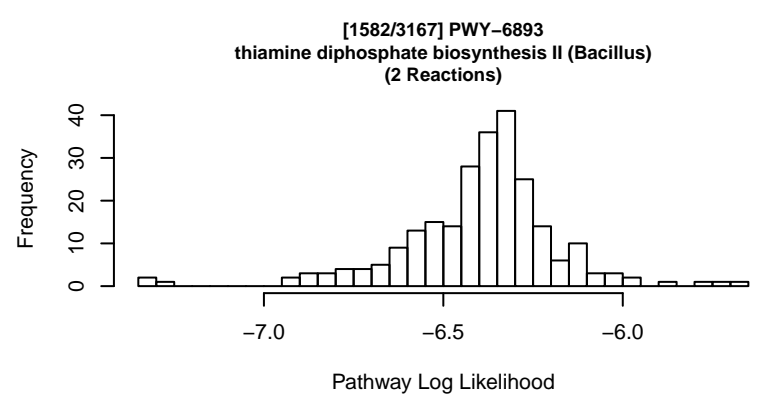
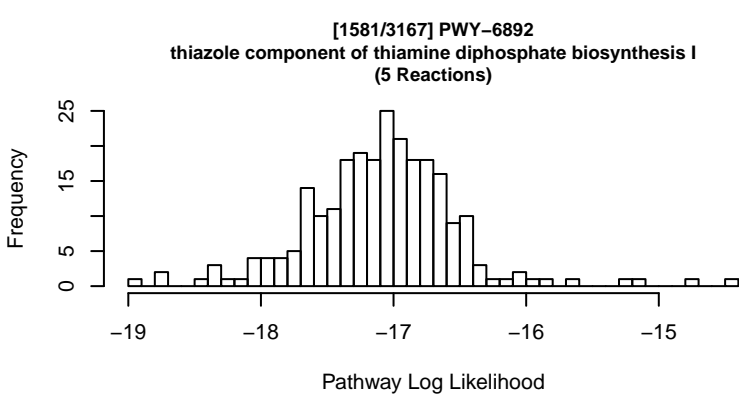


Pathway Log Likelihood

[1580/3167] PWY-6891
thiazole component of thiamine diphosphate biosynthesis II
(4 Reactions)

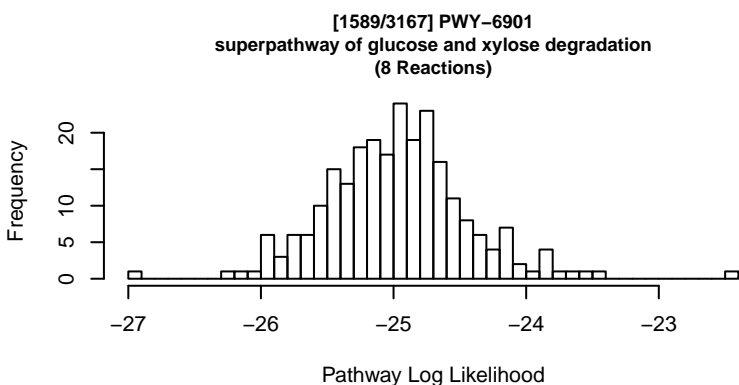


Pathway Log Likelihood



[1588/3167] PWY-6900
(*Z*)-butanethial-*S*-oxide biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[1590/3167] PWY-6902
chitin degradation II (Vibrio)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1591/3167] PWY-6906
chitin derivatives degradation
(7 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1592/3167] PWY-6907
thiamine diphosphate biosynthesis III (Staphylococcus)
(3 Reactions)

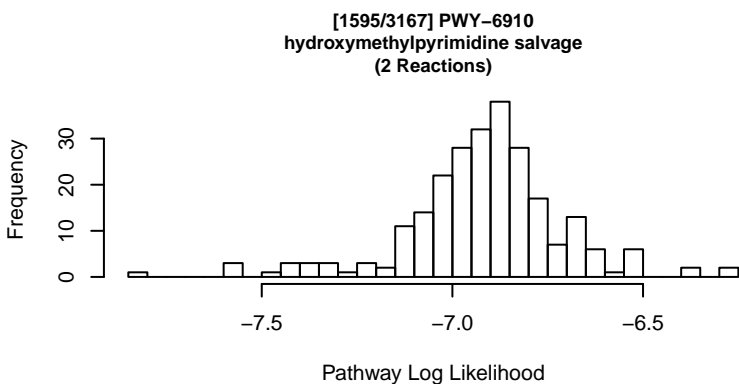
Missing 1 Reaction(s) from Pathway.

[1593/3167] PWY-6908
thiamine diphosphate biosynthesis IV (eukaryotes)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1594/3167] PWY-6909
thiazole component of thiamine diphosphate biosynthesis III
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1596/3167] PWY-6914
sophoraflavanone G biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1597/3167] PWY-6915
pentalenolactone biosynthesis
(7 Reactions)

Missing 5 Reaction(s) from Pathway.

[1598/3167] PWY-6917
vernolate biosynthesis III
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1599/3167] PWY-6919
neopentalenoketolactone and pentalenate biosynthesis
(8 Reactions)

Missing 6 Reaction(s) from Pathway.

[1600/3167] PWY-6920
6-gingerol analog biosynthesis (engineered)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1601/3167] PWY-6922
L-*N*- δ -acetylornithine biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1602/3167] PWY-6923
ricinine degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1603/3167] PWY-6926
pyrethrin I biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1604/3167] PWY-6927
chlorophyll *a* degradation II
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1605/3167] PWY-6930
phenolic malonylglucosides biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1606/3167] PWY-6931
seleno-amino acid detoxification and volatilization I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1607/3167] PWY-6932
selenate reduction
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

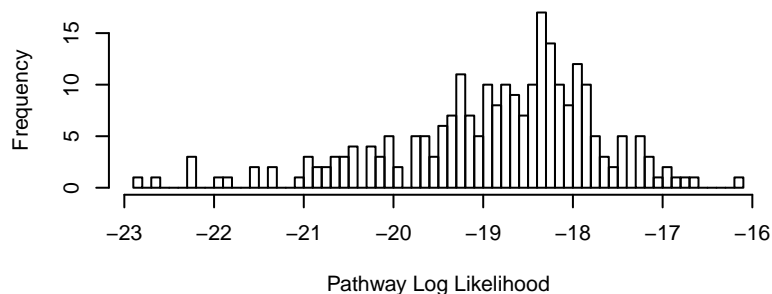
[1608/3167] PWY-6933
seleno-amino acid detoxification and volatilization III
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1609/3167] PWY-6935
seleno-amino acid detoxification and volatilization II
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

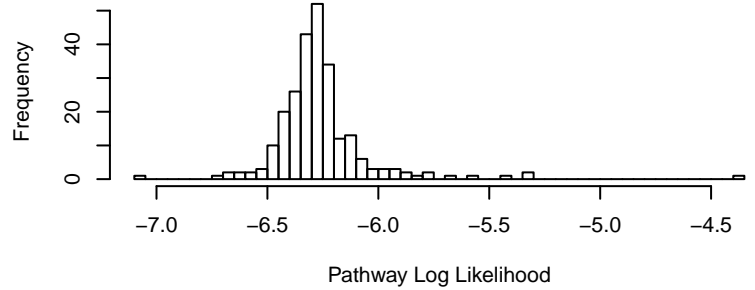
[1610/3167] PWY-6936
seleno-amino acid biosynthesis (plants)
(5 Reactions)



[1611/3167] PWY-6938
NADH repair (eukaryotes)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1612/3167] PWY-6938-1
NADH repair (prokaryotes)
(2 Reactions)



[1613/3167] PWY-6940
icosapentaenoate biosynthesis VI (fungi)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1614/3167] PWY-6941
styrene degradation
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1615/3167] PWY-6942
dTDP-D-desosamine biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1616/3167] PWY-6943
testosterone and androsterone degradation to androstendione (aerobic)
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[1617/3167] PWY-6944
androstenedione degradation I (aerobic)
(20 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1618/3167] PWY-6945
cholesterol degradation to androstenedione I (cholesterol oxidase)
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

[1619/3167] PWY-6946
cholesterol degradation to androstenedione II (cholesterol dehydrogenase)
(11 Reactions)

Missing 1 Reaction(s) from Pathway.

[1620/3167] PWY-6948
sitosterol degradation to androstenedione
(13 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1621/3167] PWY-6949
DIBOA-glucoside biosynthesis
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

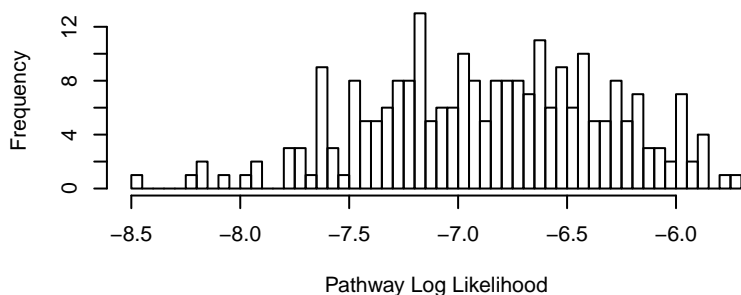
[1622/3167] PWY-695
abscisic acid biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

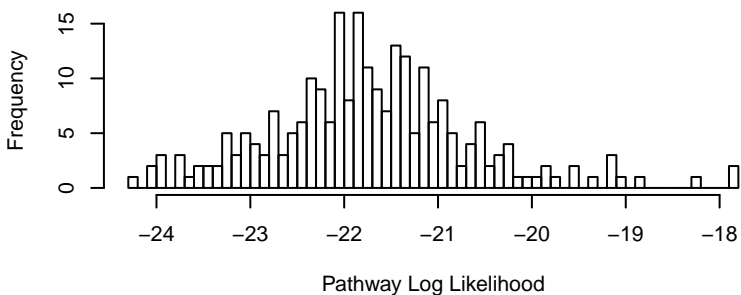
[1623/3167] PWY-6950
DIMBOA-glucoside biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1624/3167] PWY-6952
glycerophosphodiester degradation
(2 Reactions)



[1625/3167] PWY-6953
dTDP-3-acetamido- α -D-fucose biosynthesis
(5 Reactions)



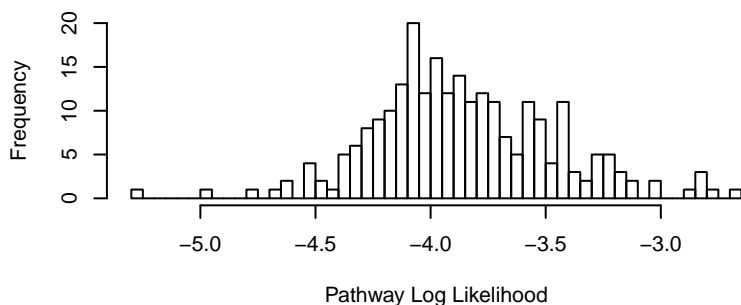
[1626/3167] PWY-6955
lincomycin A biosynthesis
(9 Reactions)

Missing 2 Reaction(s) from Pathway.

[1627/3167] PWY-6958
icosapentaenoate biosynthesis I (lower eukaryotes)
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[1628/3167] PWY-6959
L-ascorbate degradation V
(1 Reactions)

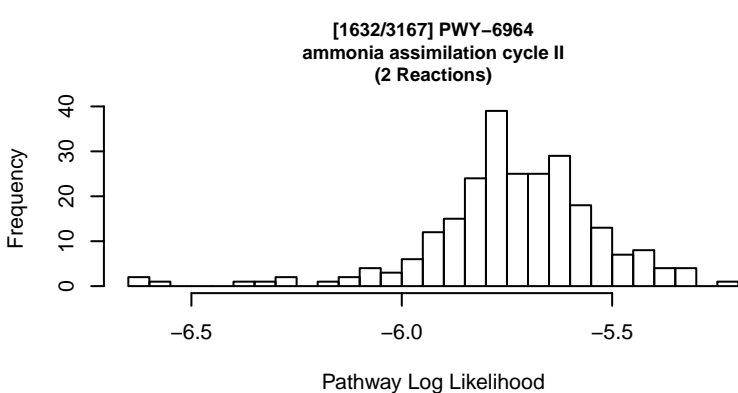
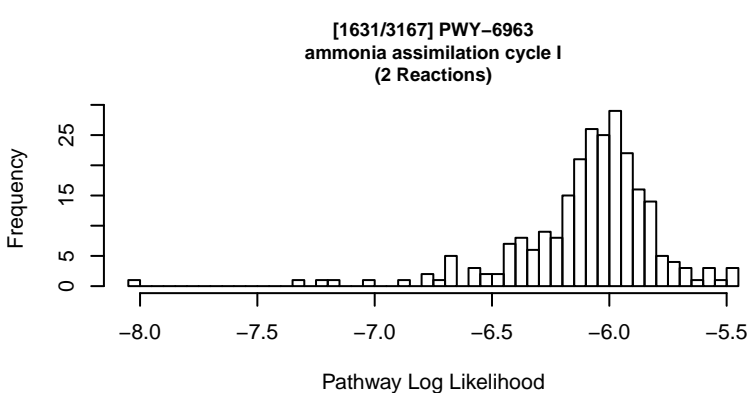


[1629/3167] PWY-6960
L-ascorbate degradation III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1630/3167] PWY-6961
L-ascorbate degradation II (bacterial, aerobic)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



[1633/3167] PWY-6965
methylamine degradation II
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1634/3167] PWY-6966
methanol oxidation to formaldehyde I
(2 Reactions)

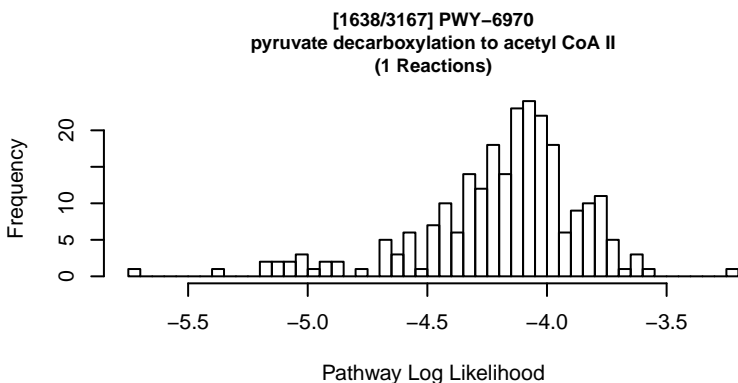
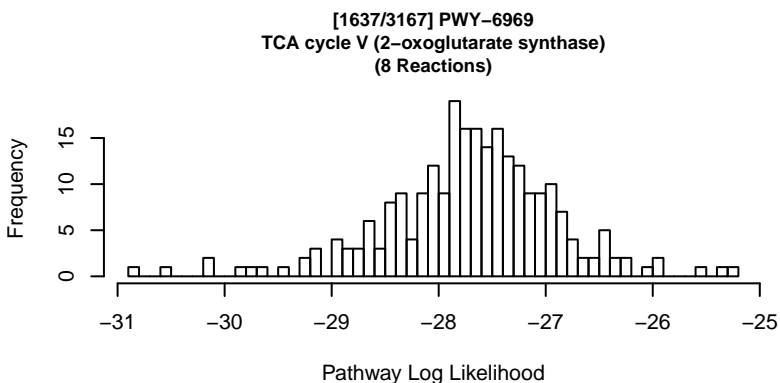
Missing 1 Reaction(s) from Pathway.

[1635/3167] PWY-6967
methylamine degradation I
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

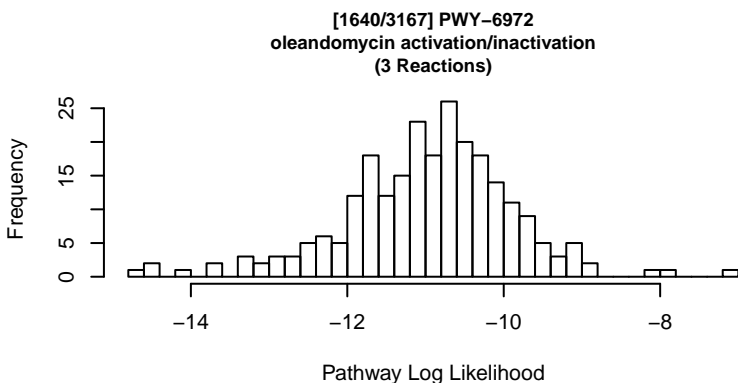
[1636/3167] PWY-6968
trimethylamine degradation
(3 Reactions)

Missing ALL Reaction(s) from Pathway.



[1639/3167] PWY-6971
oleandomycin biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

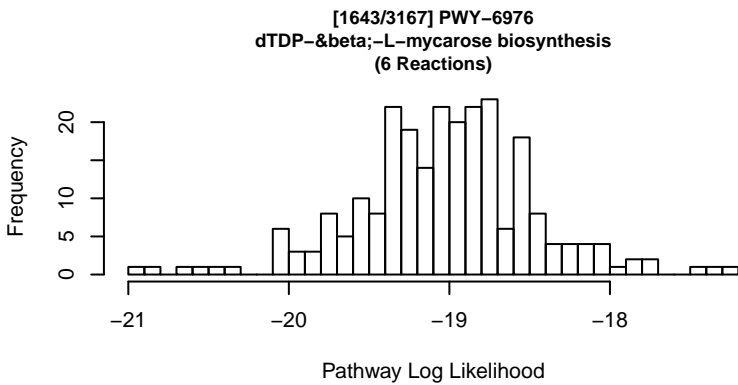


[1641/3167] PWY-6973
dTDP-α-D-olivose, dTDP-α-D-oliose and dTDP-α-D-mycarose biosynt
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

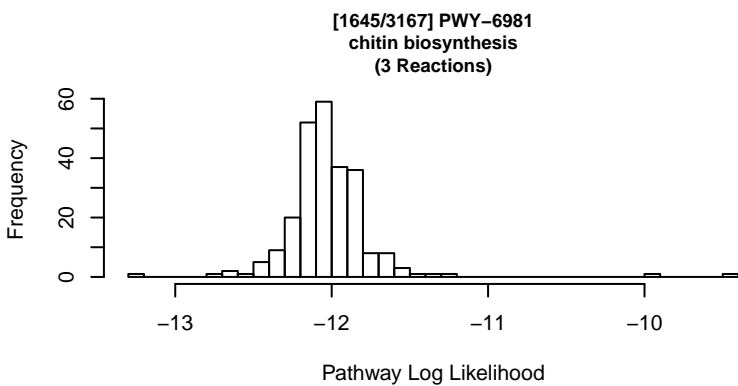
[1642/3167] PWY-6974
dTDP-β-L-olivose biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



[1644/3167] PWY-6978
plastoquinol-9 biosynthesis II
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

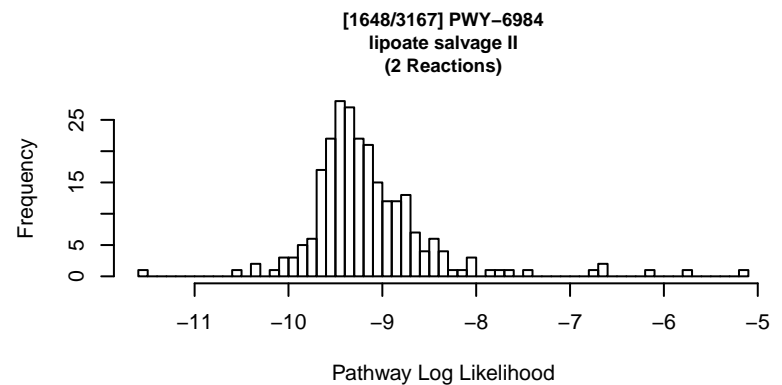


[1646/3167] PWY-6982
umbelliferone biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1647/3167] PWY-6983
<i>threo</i>-tetrahydrobiopterin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



[1649/3167] PWY-6986
alginate degradation
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[1650/3167] PWY-6987
lipoate biosynthesis and incorporation III (Bacillus)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1651/3167] PWY-6989
(-)-camphor degradation
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1652/3167] PWY-699
brassinosteroid biosynthesis I
(7 Reactions)

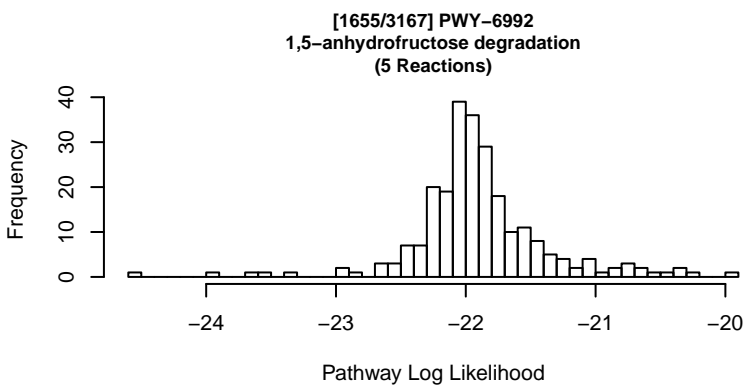
Missing 1 Reaction(s) from Pathway.

[1653/3167] PWY-6990
(+)-camphor biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1654/3167] PWY-6991
(-)-camphor biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.



[1656/3167] PWY-6993
nicotine degradation II (pyrrolidine pathway)
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

[1657/3167] PWY-6994
L-pyrrolysine biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1658/3167] PWY-6995
5-hydroxymethylfurfural degradation
(3 Reactions)

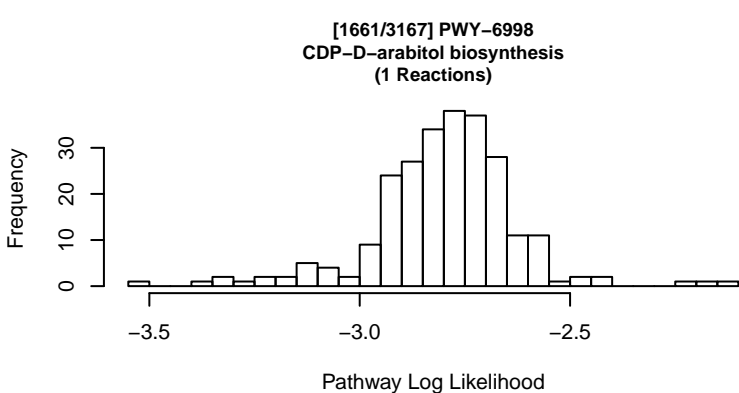
Missing 2 Reaction(s) from Pathway.

[1659/3167] PWY-6996
daidzin and daidzein degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1660/3167] PWY-6997
furfural degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.



[1662/3167] PWY-6999
theophylline degradation
(4 Reactions)

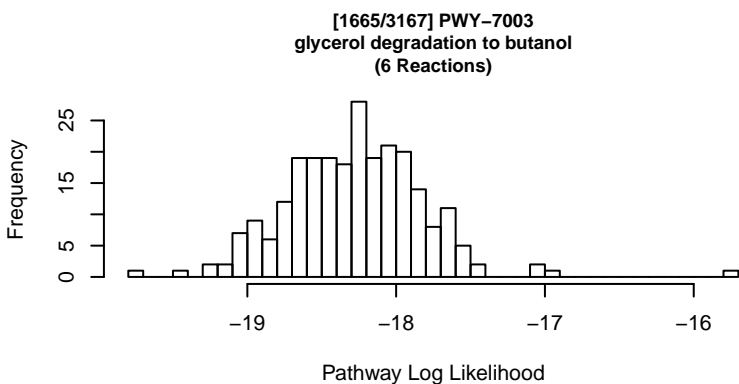
Missing 2 Reaction(s) from Pathway.

[1663/3167] PWY-7000
kanamycin biosynthesis
(14 Reactions)

Missing 4 Reaction(s) from Pathway.

[1664/3167] PWY-7002
4-hydroxyacetophenone degradation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.



[1666/3167] PWY-7006
4-amino-3-hydroxybenzoate degradation
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1667/3167] PWY-7007
methyl ketone biosynthesis (engineered)
(6 Reactions)

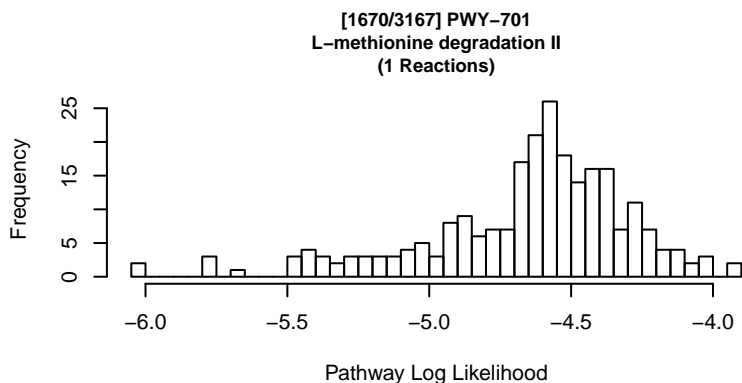
Zeros/-Inf for reaction(s) in Pathway

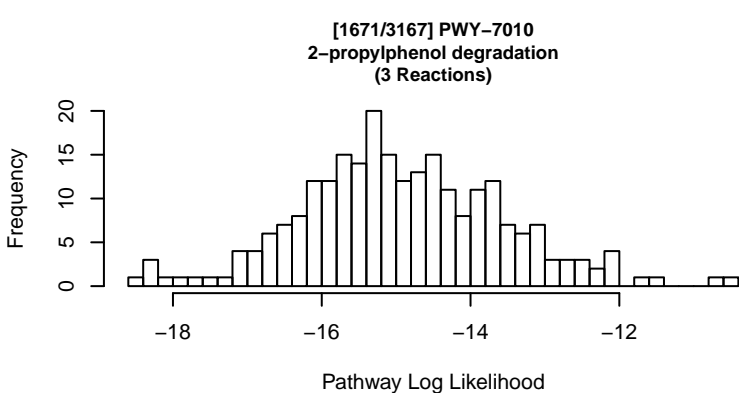
[1668/3167] PWY-7008
2-hydroxybiphenyl degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1669/3167] PWY-7009
2,2'-dihydroxybiphenyl degradation
(7 Reactions)

Missing 2 Reaction(s) from Pathway.





[1672/3167] PWY-7011
2-isopropylphenol degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1673/3167] PWY-7013
(*S*)-propane-1,2-diol degradation
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[1674/3167] PWY-7014
paromamine biosynthesis I
(6 Reactions)

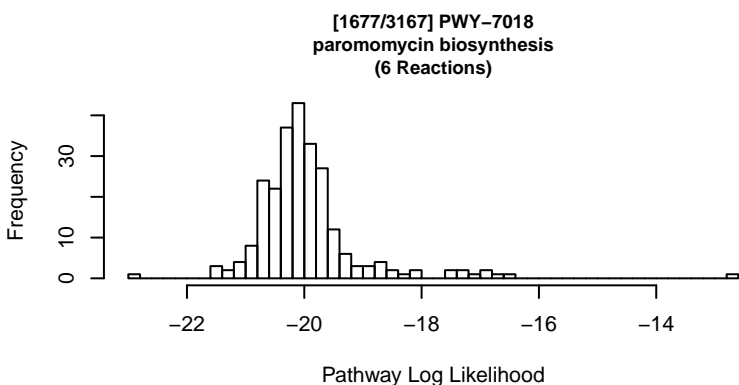
Missing 1 Reaction(s) from Pathway.

[1675/3167] PWY-7015
ribostamycin biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

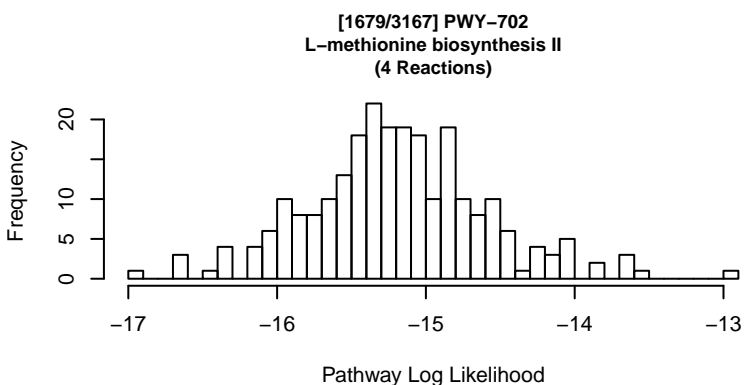
[1676/3167] PWY-7016
neomycin biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.



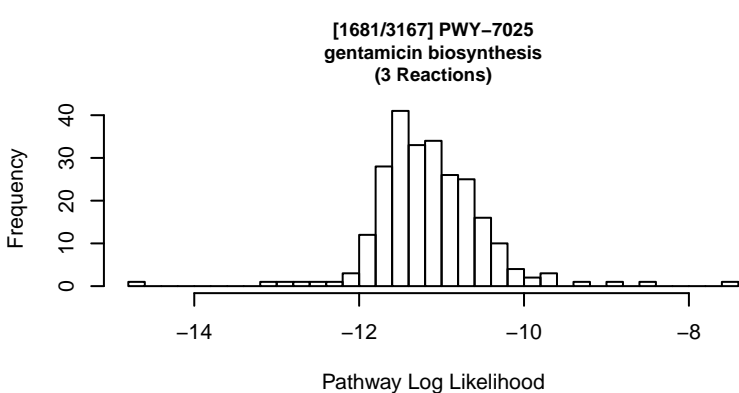
[1678/3167] PWY-7019
butirosin biosynthesis
(6 Reactions)

Missing 3 Reaction(s) from Pathway.



[1680/3167] PWY-7022
paromamine biosynthesis II
(6 Reactions)

Missing 1 Reaction(s) from Pathway.



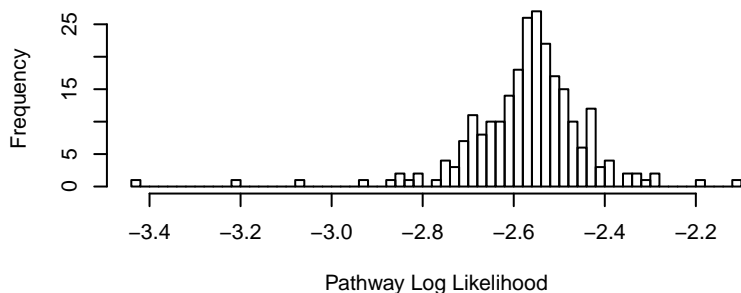
[1682/3167] PWY-7027
hentriaconta-3,6,9,12,15,19,22,25,28-nonaene biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1683/3167] PWY-7028
UDP-*N,N'*-diacetyl bacillosamine biosynthesis
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1684/3167] PWY-7029
terminal olefins biosynthesis II
(1 Reactions)

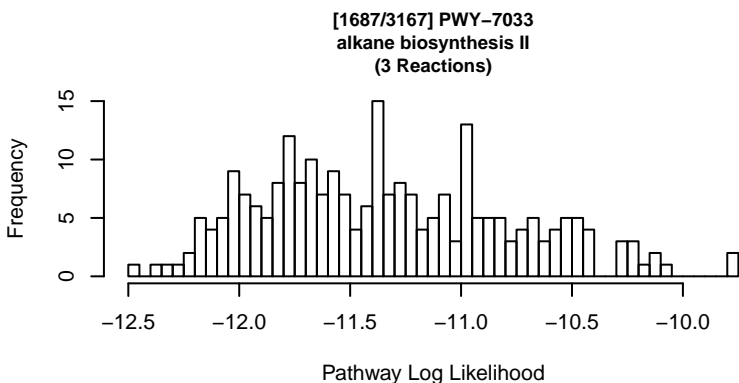


[1685/3167] PWY-7031
protein *N*-glycosylation (bacterial)
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[1686/3167] PWY-7032
alkane biosynthesis I
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



[1688/3167] PWY-7035
(9*Z*)-tricosene biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1689/3167] PWY-7036
very long chain fatty acid biosynthesis II
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1690/3167] PWY-7037
protein *O*-glycosylation (Neisseria)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

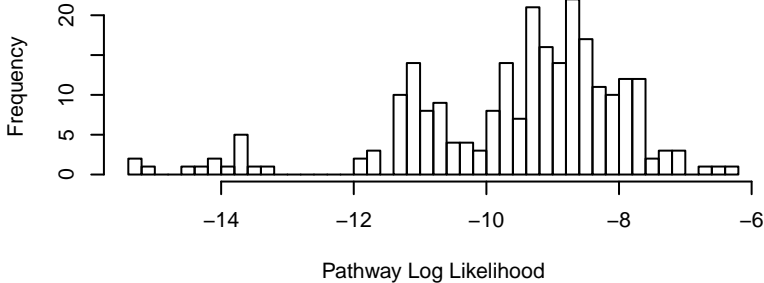
[1691/3167] PWY-7039
phosphatidate metabolism, as a signaling molecule
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1692/3167] PWY-7040
violacein biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1693/3167] PWY-7042
the visual cycle (insects)
(2 Reactions)



[1694/3167] PWY-7043
11-*cis*-3-hydroxyretinal biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1695/3167] PWY-7044
5-nitroanthranilate degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1696/3167] PWY-7045
mithramycin biosynthesis
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

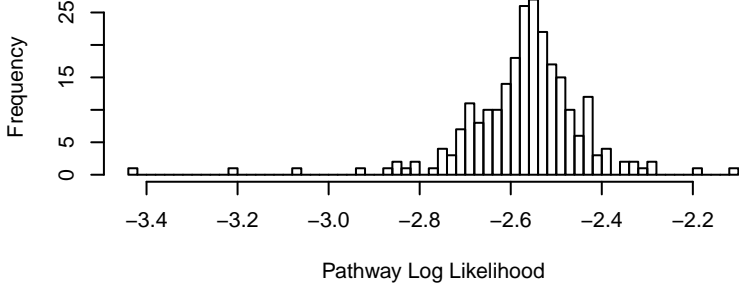
[1697/3167] PWY-7046
4-coumarate degradation (anaerobic)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

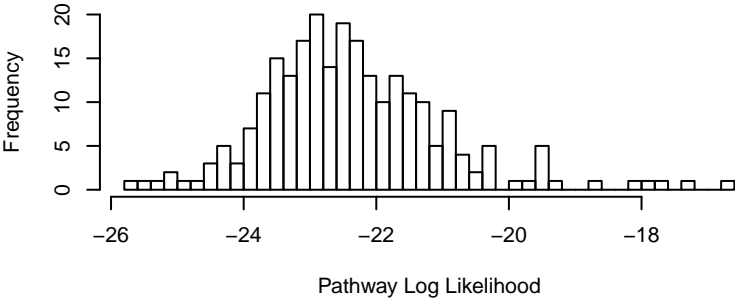
[1698/3167] PWY-7049
icosapentaenoate biosynthesis II (6-desaturase, mammals)
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

[1699/3167] PWY-7050
icosapentaenoate biosynthesis IV (bacteria)
(1 Reactions)



[1700/3167] PWY-7052
cyanophycin metabolism
(4 Reactions)



[1701/3167] PWY-7053
docosaehaenoate biosynthesis I (lower eukaryotes)
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[1702/3167] PWY-7055
daphnetin modification
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1703/3167] PWY-7056
daphnin interconversion
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1704/3167] PWY-7057
cichoriin interconversion
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1705/3167] PWY-7058
esculetin modification
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1706/3167] PWY-7059
fumigaclavine biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[1707/3167] PWY-7065
2 α ,7 β -dihydroxylation of taxusin
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1708/3167] PWY-7066
glycyrrhetinate biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

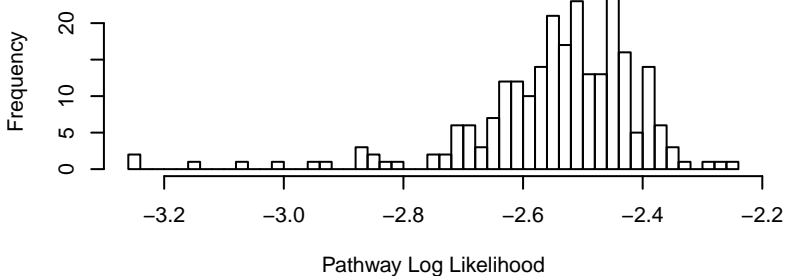
[1709/3167] PWY-7069
oleanolate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1710/3167] PWY-7070
steviol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

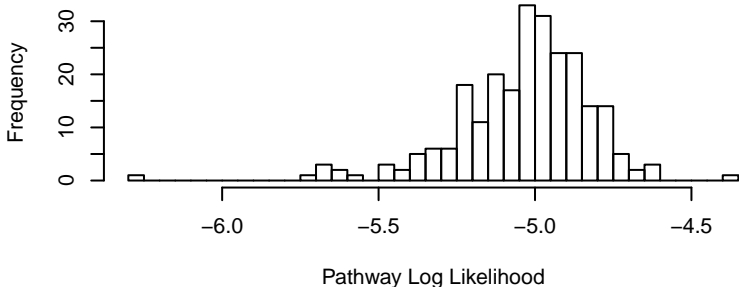
[1711/3167] PWY-7071
steviol glucoside biosynthesis (rebaudioside A biosynthesis)
(1 Reactions)



[1712/3167] PWY-7072
hopanoid biosynthesis (bacteria)
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[1713/3167] PWY-7074
phenylethanol glycoconjugate biosynthesis
(2 Reactions)



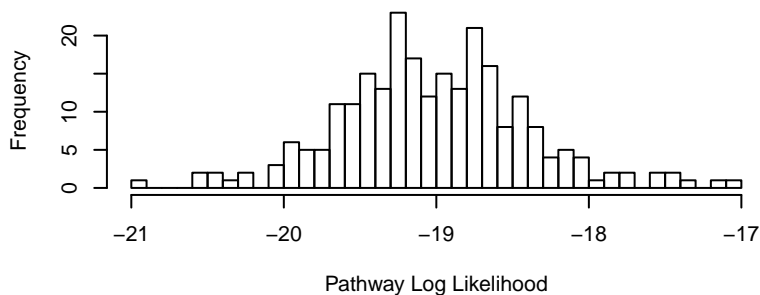
[1714/3167] PWY-7075
phenylethyl acetate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1715/3167] PWY-7076
3,5-dimethoxytoluene biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1716/3167] PWY-7077
<i>N</i>-acetyl-D-galactosamine degradation
(5 Reactions)



[1717/3167] PWY-7079
geodin biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[1718/3167] PWY-7080
asterrate biosynthesis
(2 Reactions)

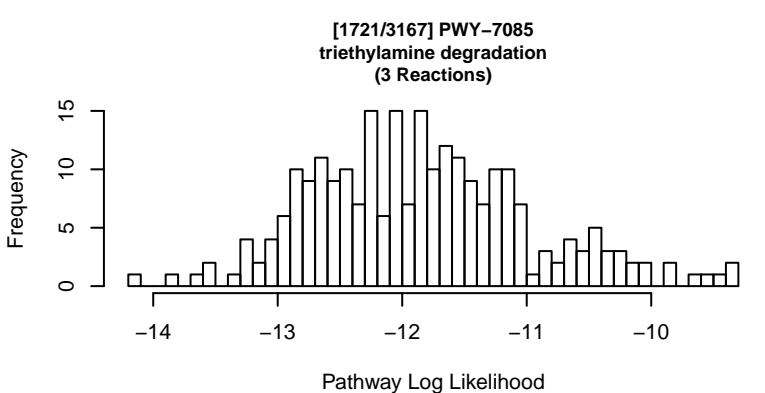
Missing ALL Reaction(s) from Pathway.

[1719/3167] PWY-7081
4-aminophenol degradation
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1720/3167] PWY-7084
nitrifier denitrification
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

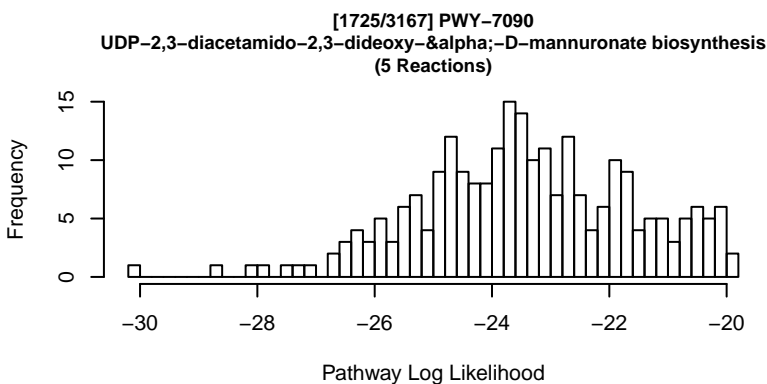
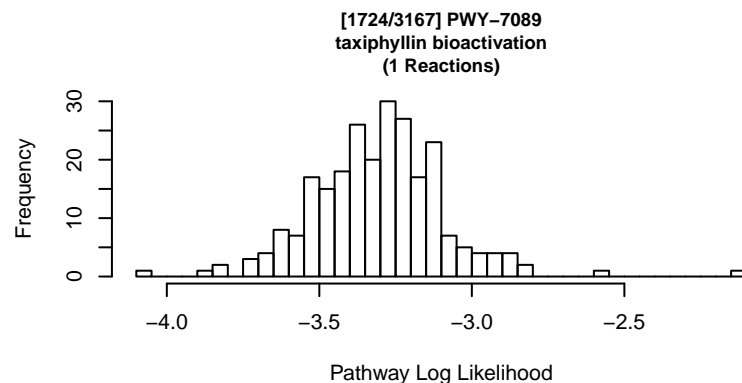


[1722/3167] PWY-7087
2-methylisoborneol biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1723/3167] PWY-7088
taxiphyllin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[1726/3167] PWY-7091
linustatin bioactivation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1727/3167] PWY-7092
neolinustatin bioactivation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1728/3167] PWY-7093
vicianin bioactivation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1729/3167] PWY-7094
fatty acid salvage
(6 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1730/3167] PWY-7095
3,4-dihydroxymandelonitrile β -D-glucose biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1731/3167] PWY-7096
triclosan resistance
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

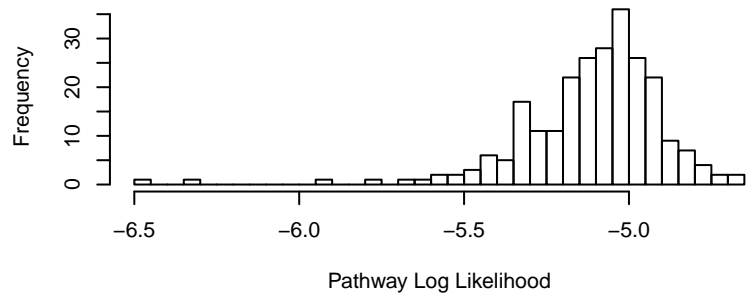
[1732/3167] PWY-7097
vanillin and vanillate degradation I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1733/3167] PWY-7098
vanillin and vanillate degradation II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1734/3167] PWY-7100
spinosyn A biosynthesis
(2 Reactions)



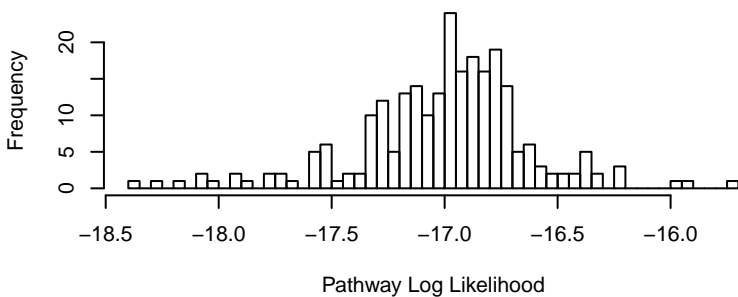
[1735/3167] PWY-7101
5-deoxystrigol biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

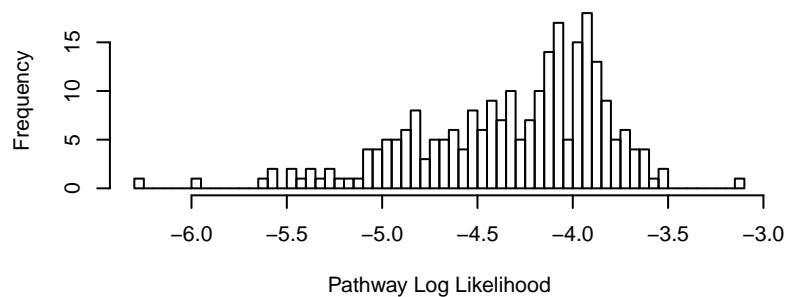
[1736/3167] PWY-7102
bisabolene biosynthesis (engineered)
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[1737/3167] PWY-7104
dTDP-β-L-megosamine biosynthesis
(6 Reactions)



[1738/3167] PWY-7105
olivetol biosynthesis
(1 Reactions)



[1739/3167] PWY-7106
erythromycin D biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1740/3167] PWY-7108
erythromycin A biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1741/3167] PWY-7109
megalomicin A biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1742/3167] PWY-7111
pyruvate fermentation to isobutanol (engineered)
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1743/3167] PWY-7112
4-hydroxy-2-nonenal detoxification
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

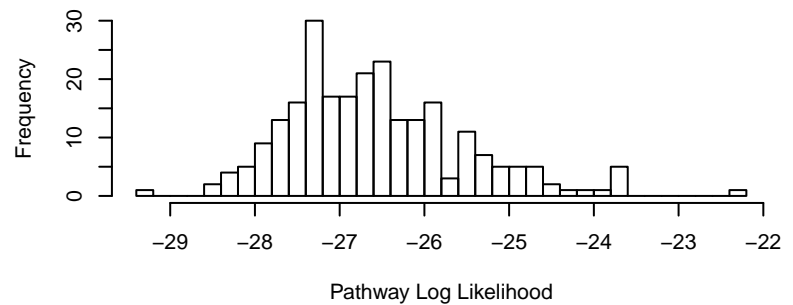
[1744/3167] PWY-7113
furcatin degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1745/3167] PWY-7114
tea aroma glycosidic precursor bioactivation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

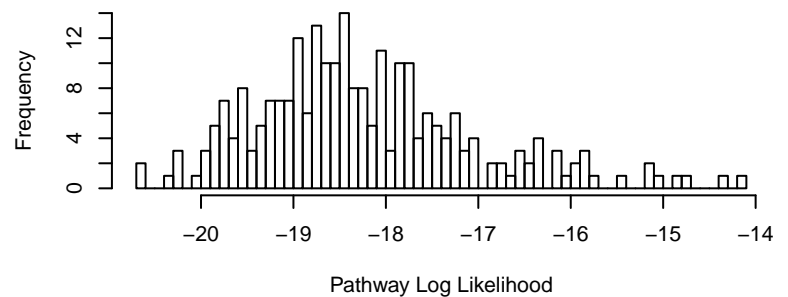
[1746/3167] PWY-7115
C4 photosynthetic carbon assimilation cycle, NAD-ME type
(7 Reactions)



[1747/3167] PWY-7117
C4 photosynthetic carbon assimilation cycle, PEPCK type
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[1748/3167] PWY-7118
chitin deacetylation
(4 Reactions)

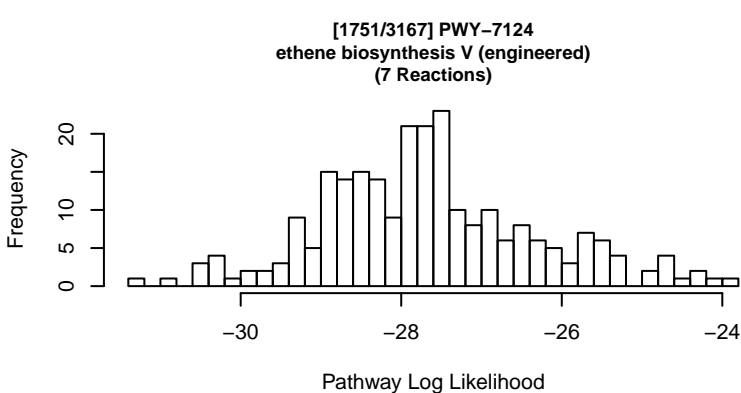


[1749/3167] PWY-7119
ceramide and sphingolipid recycling and degradation (yeast)
(8 Reactions)

Missing 3 Reaction(s) from Pathway.

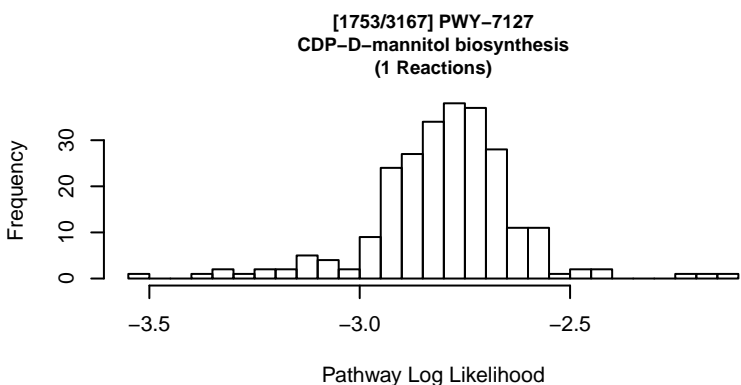
[1750/3167] PWY-7120
esterified suberin biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1752/3167] PWY-7126
ethene biosynthesis IV (engineered)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1754/3167] PWY-7128
nicotine degradation III (VPP pathway)
(8 Reactions)

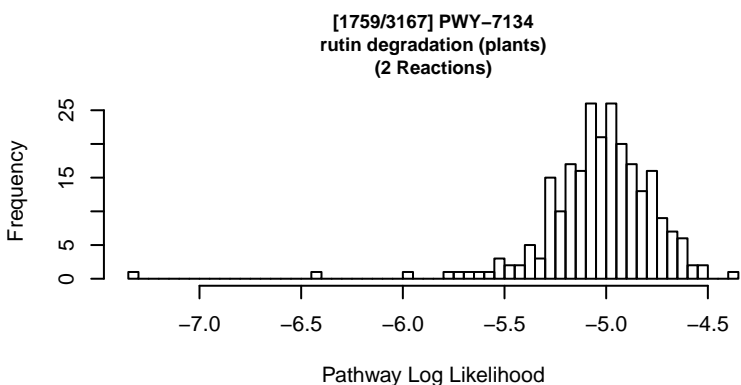
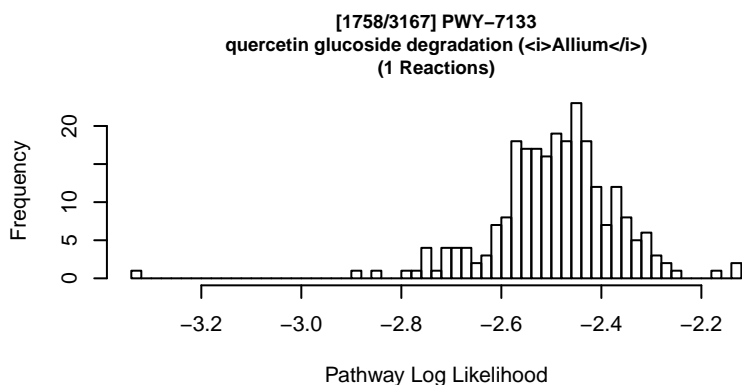
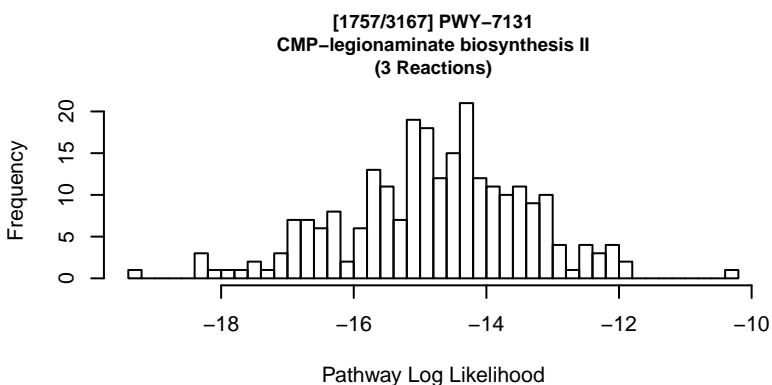
Missing 3 Reaction(s) from Pathway.

[1755/3167] PWY-7129
quercetin glucoside biosynthesis (<i>Allium</i>)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1756/3167] PWY-7130
L-glucose degradation
(6 Reactions)

Missing 2 Reaction(s) from Pathway.



[1760/3167] PWY-7135
emetine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1761/3167] PWY-7136
β myrcene degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

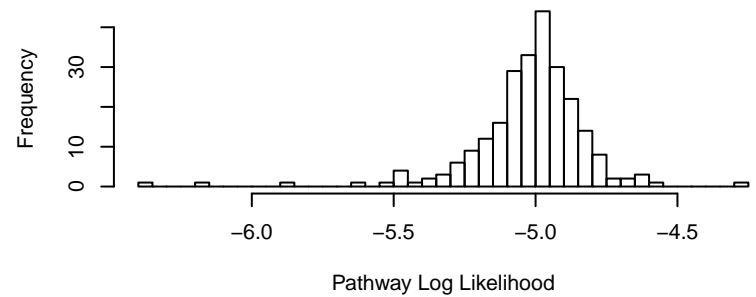
[1762/3167] PWY-7137
quercetin gentiotetraside biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1763/3167] PWY-7138
noscapine biosynthesis
(11 Reactions)

Missing ALL Reaction(s) from Pathway.

[1764/3167] PWY-7139
sesaminol glucoside biosynthesis
(2 Reactions)



[1765/3167] PWY-7140
myricetin gentiobioside biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1766/3167] PWY-7141
(3*S*)-linalool biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

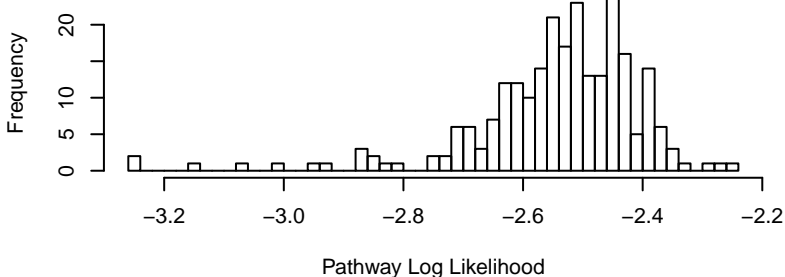
[1767/3167] PWY-7142
cyanide detoxification II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1768/3167] PWY-7143
kaempferol gentiobioside biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1769/3167] PWY-7145
genistin gentiobioside biosynthesis
(1 Reactions)



[1770/3167] PWY-7147
8-amino-7-oxononanoate biosynthesis II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1771/3167] PWY-7150
polymethylated quercetin glucoside biosynthesis I – quercetin series (Chrysosplenium
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[1773/3167] PWY-7152
pinolenate and coniferonate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1775/3167] PWY-7154
ergosterol biosynthesis II
(9 Reactions)

Missing 5 Reaction(s) from Pathway.

[1777/3167] PWY-7157
eupatolitin 3-O-glucoside biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1772/3167] PWY-7151
polymethylated quercetin glucoside biosynthesis II – quercetagenin series (Chrysosplenium
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

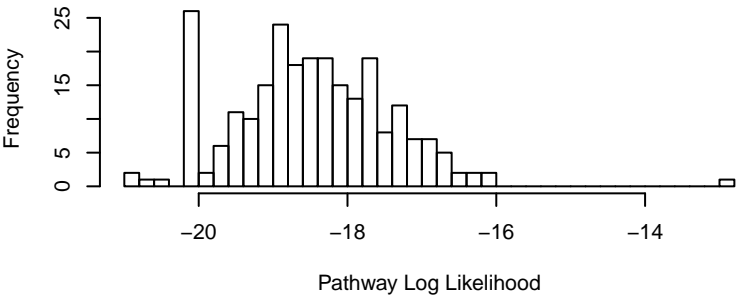
[1774/3167] PWY-7153
grixazone biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

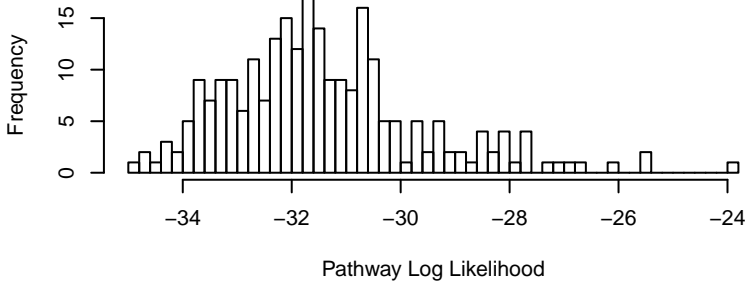
[1776/3167] PWY-7155
7-dehydroporiferasterol biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1778/3167] PWY-7158
L-phenylalanine degradation V
(3 Reactions)



[1779/3167] PWY-7159
3,8-divinyl-chlorophyllide a biosynthesis III (aerobic, light independent)
(6 Reactions)



[1780/3167] PWY-7160
polymethylated myricetin biosynthesis (tomato)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1781/3167] PWY-7161
polymethylated quercetin biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1782/3167] PWY-7163
polymethylated kaempferol biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1783/3167] PWY-7164
chlorophyll *a* degradation III
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

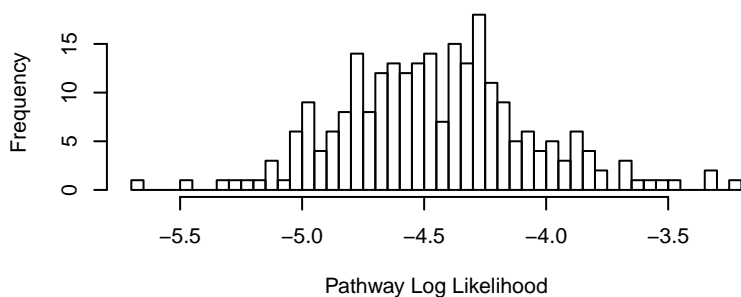
[1784/3167] PWY-7165
L-ascorbate biosynthesis VIII (engineered pathway)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1785/3167] PWY-7166
kaempferide triglycoside biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1786/3167] PWY-7167
choline degradation III
(1 Reactions)



[1787/3167] PWY-7168
flavonol acylglucoside biosynthesis I – kaempferol derivatives
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

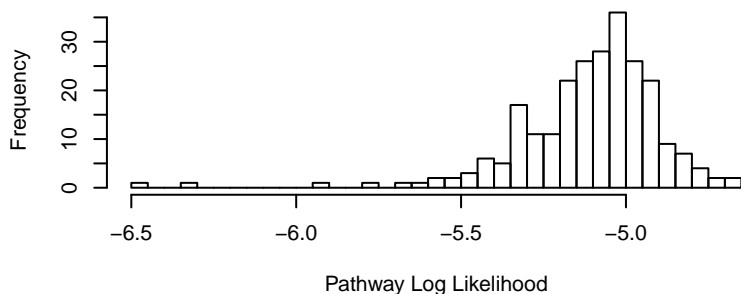
[1788/3167] PWY-7169
hyperxanthone E biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1789/3167] PWY-7170
phytochromobilin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1790/3167] PWY-7171
flavonol acylglucoside biosynthesis II – isorhamnetin derivatives
(2 Reactions)



[1791/3167] PWY-7172
flavonol acylglucoside biosynthesis III – quercetin derivatives
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

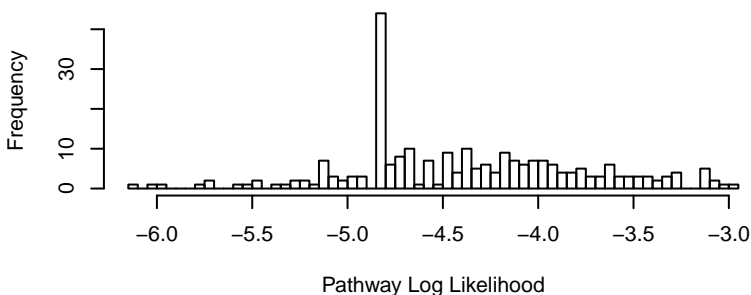
[1792/3167] PWY-7173
quercetin triglucoside biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

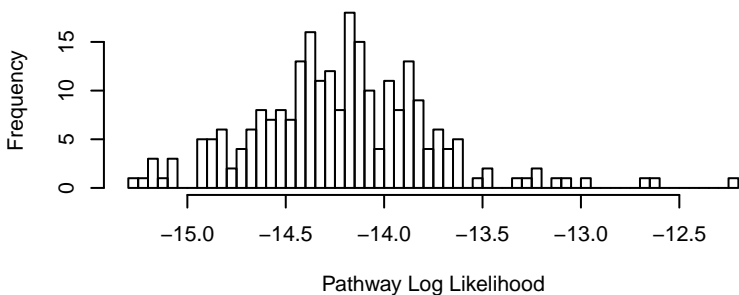
[1793/3167] PWY-7174
***S*-methyl-5-thio- α -D-ribose 1-phosphate degradation II**
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1794/3167] PWY-7175
nostoxanthin biosynthesis
(1 Reactions)



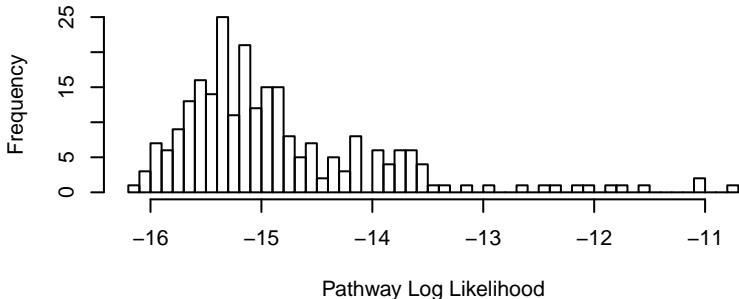
[1795/3167] PWY-7176
UTP and CTP *de novo* biosynthesis
(4 Reactions)



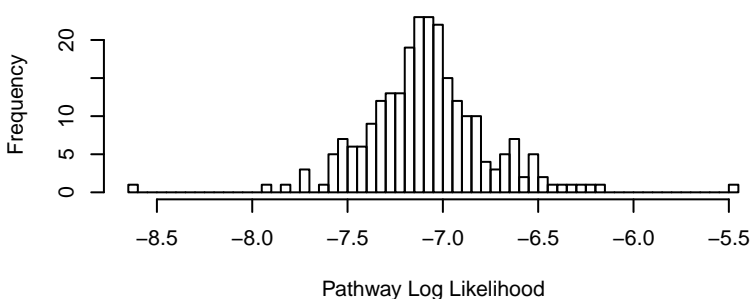
[1796/3167] PWY-7177
UTP and CTP dephosphorylation II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

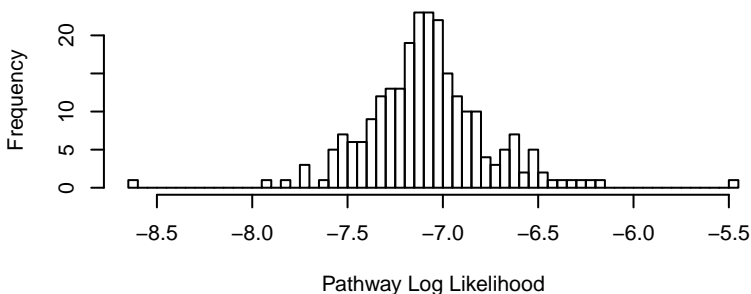
[1797/3167] PWY-7178
D-xylose degradation to ethylene glycol (engineered)
(3 Reactions)



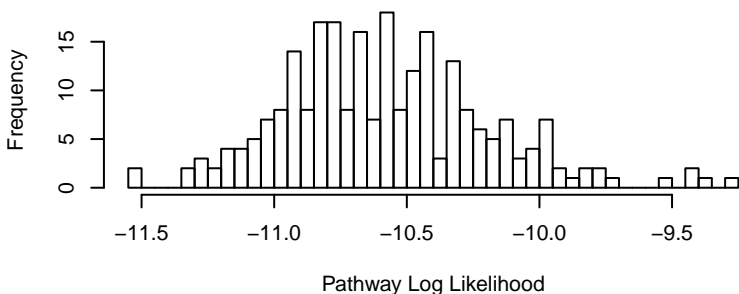
[1798/3167] PWY-7179
purine deoxyribonucleosides degradation I
(2 Reactions)



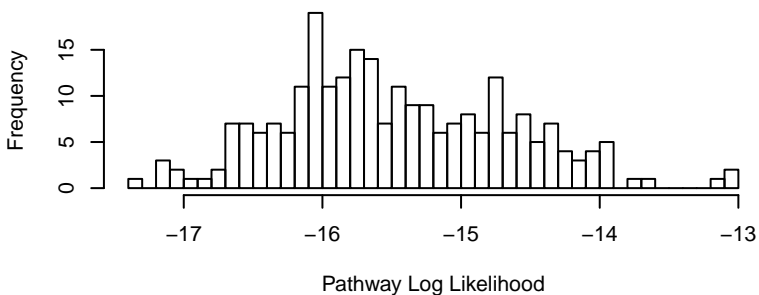
[1799/3167] PWY-7179-1
purine deoxyribonucleosides degradation II
(2 Reactions)



[1800/3167] PWY-7180
2-deoxy- α -D-ribose 1-phosphate degradation
(3 Reactions)



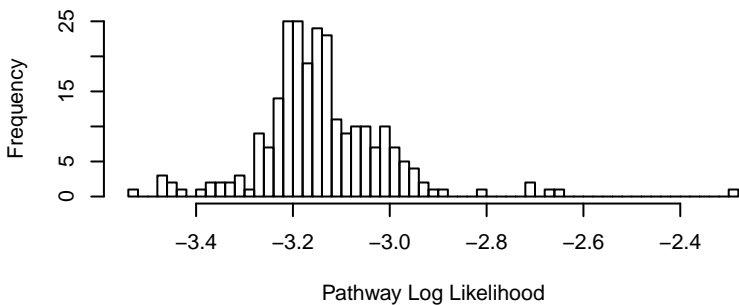
[1801/3167] PWY-7181
pyrimidine deoxyribonucleosides degradation
(4 Reactions)



[1802/3167] PWY-7182
linalool biosynthesis I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1803/3167] PWY-7183
pyrimidine nucleobases salvage I
(1 Reactions)



[1804/3167] PWY-7184
pyrimidine deoxyribonucleotides <i>de novo</i> biosynthesis I
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

[1805/3167] PWY-7185
UTP and CTP dephosphorylation I
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[1806/3167] PWY-7186
superpathway of scopolin and esculin biosynthesis
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

[1807/3167] PWY-7187
pyrimidine deoxyribonucleotides <i>de novo</i> biosynthesis II
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

[1808/3167] PWY-7188
eriodictyol <i>C</i>-glucosylation
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1809/3167] PWY-7189
pinocembrin <i>C</i>-glucosylation
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1810/3167] PWY-7191
kaempferol diglycoside biosynthesis (pollen-specific)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

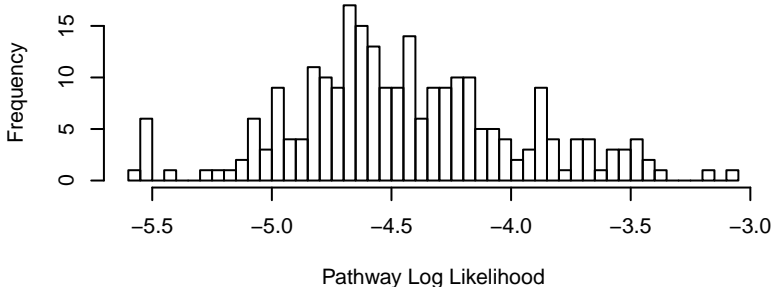
[1811/3167] PWY-7192
quercetin diglycoside biosynthesis (pollen-specific)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

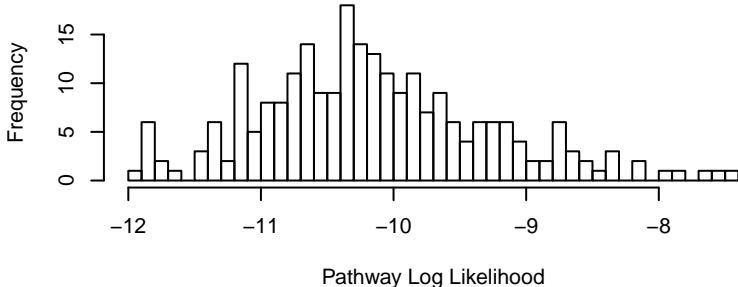
[1812/3167] PWY-7193
pyrimidine ribonucleosides salvage I
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1813/3167] PWY-7194
pyrimidine nucleobases salvage II
(1 Reactions)



[1814/3167] PWY-7195
pyrimidine ribonucleosides salvage III
(2 Reactions)



[1815/3167] PWY-7197
pyrimidine deoxyribonucleotide phosphorylation
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

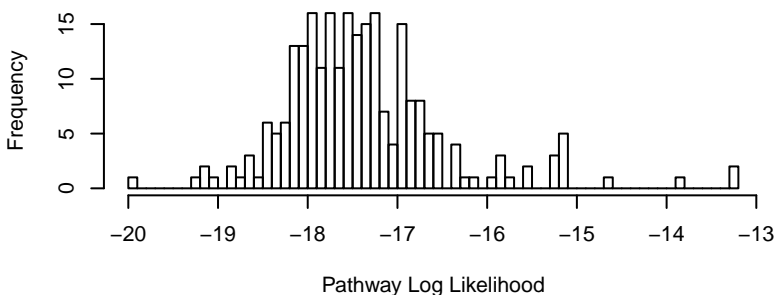
[1816/3167] PWY-7198
pyrimidine deoxyribonucleotides *<i>de novo</i>* biosynthesis IV
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

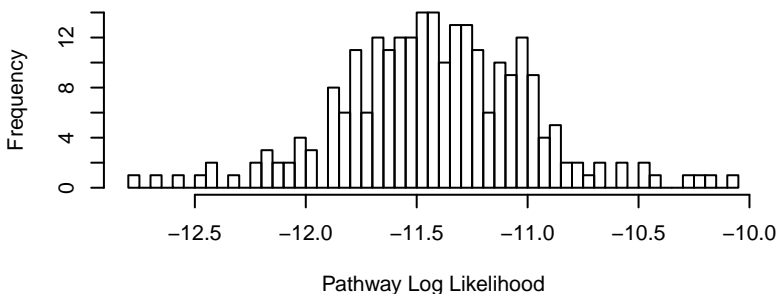
[1817/3167] PWY-7199
pyrimidine deoxyribonucleosides salvage
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

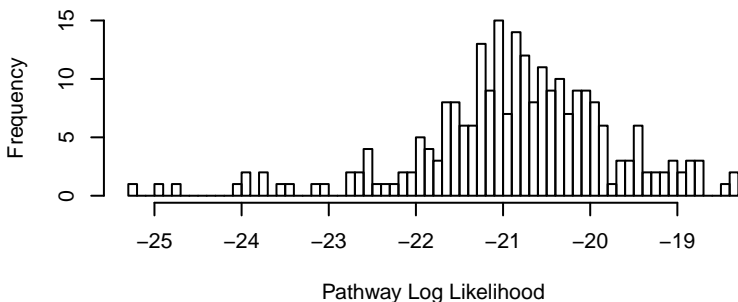
[1818/3167] PWY-7204
pyridoxal 5'-phosphate salvage II (plants)
(4 Reactions)



[1819/3167] PWY-7205
CMP phosphorylation
(3 Reactions)



[1820/3167] PWY-7206
pyrimidine deoxyribonucleotides dephosphorylation
(5 Reactions)



[1821/3167] PWY-721
3-methylquinoline degradation
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1822/3167] PWY-7210
pyrimidine deoxyribonucleotides biosynthesis from CTP
(9 Reactions)

Missing 2 Reaction(s) from Pathway.

[1823/3167] PWY-7212
baicalein metabolism
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

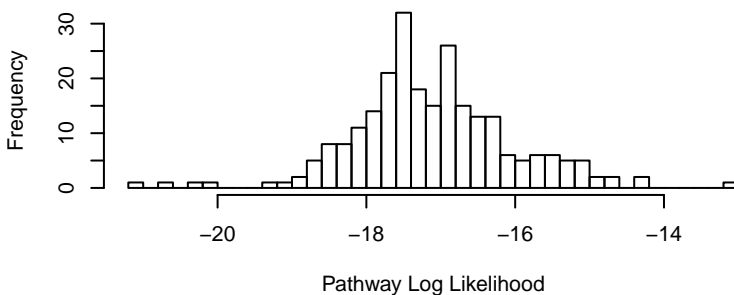
[1824/3167] PWY-7213
wogonin metabolism
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1825/3167] PWY-7214
baicalein degradation (hydrogen peroxide detoxification)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

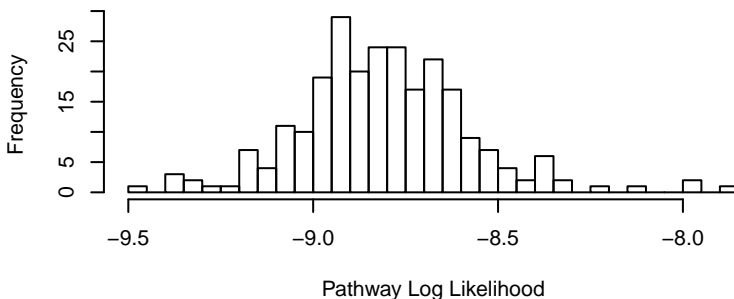
[1826/3167] PWY-7216
(R)- and (S)-3-hydroxybutanoate biosynthesis (engineered)
(4 Reactions)



[1827/3167] PWY-7218
photosynthetic 3-hydroxybutanoate biosynthesis (engineered)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

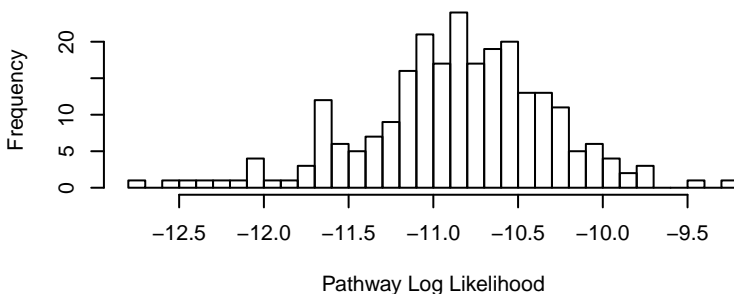
[1828/3167] PWY-7219
adenosine ribonucleotides *de novo* biosynthesis
(3 Reactions)

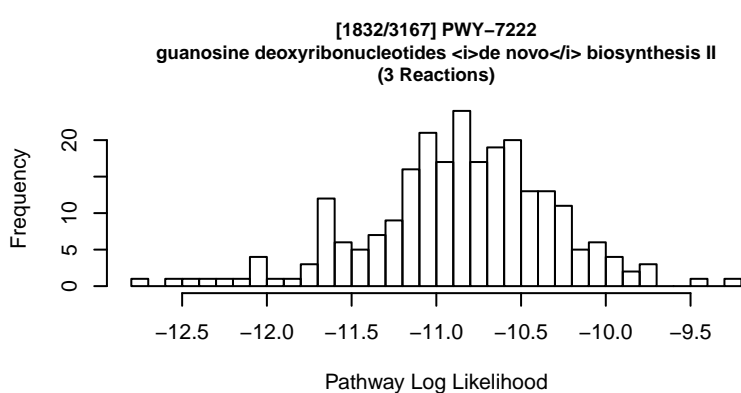
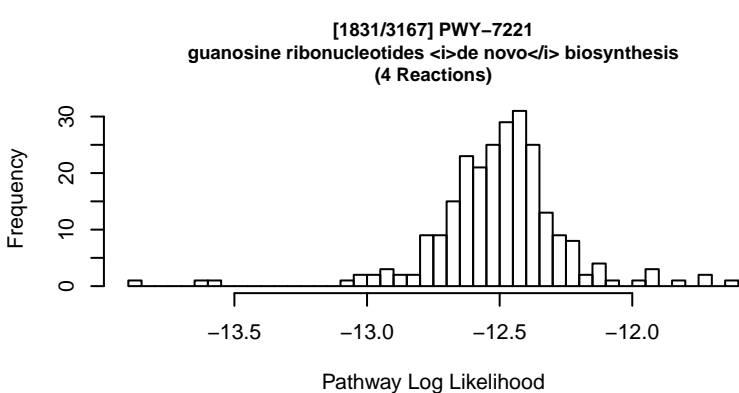


[1829/3167] PWY-722
nicotinate degradation I
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

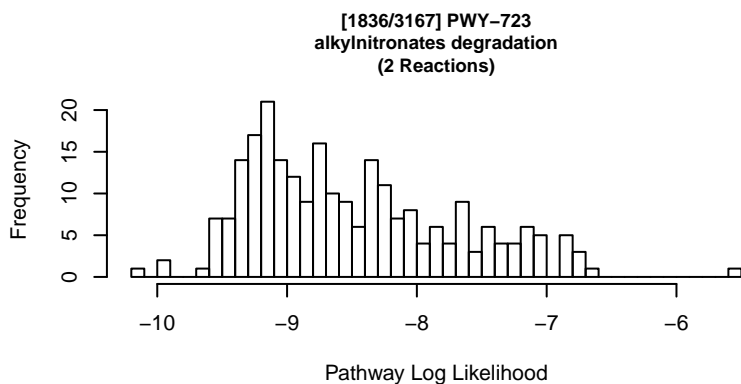
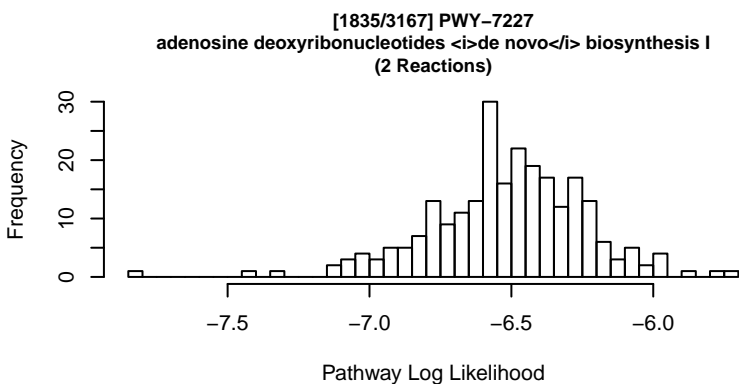
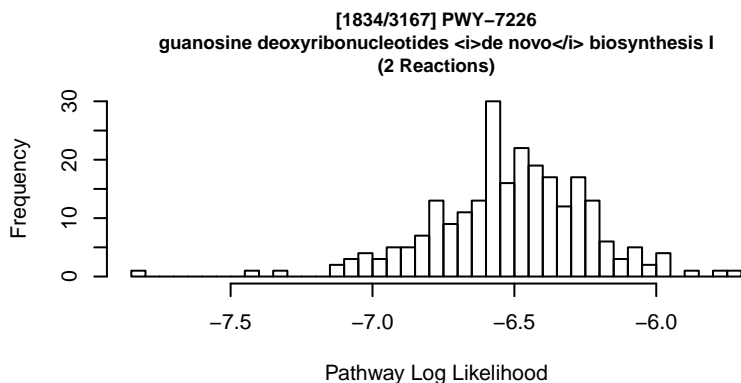
[1830/3167] PWY-7220
adenosine deoxyribonucleotides *de novo* biosynthesis II
(3 Reactions)





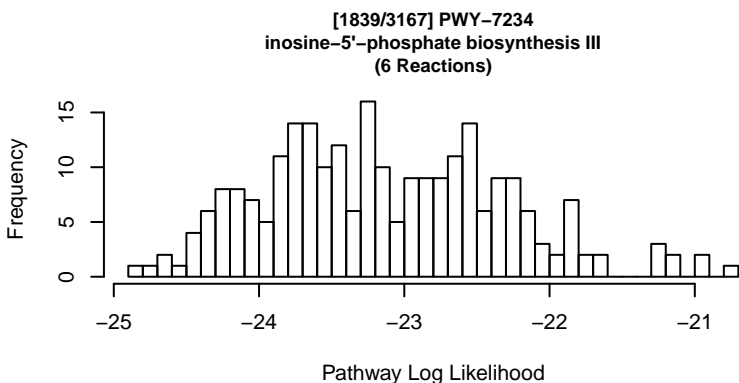
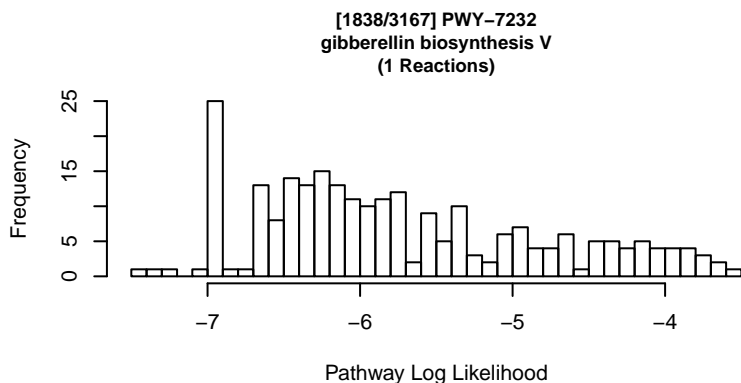
[1833/3167] PWY-7224
purine deoxyribonucleosides salvage
(8 Reactions)

Missing 2 Reaction(s) from Pathway.



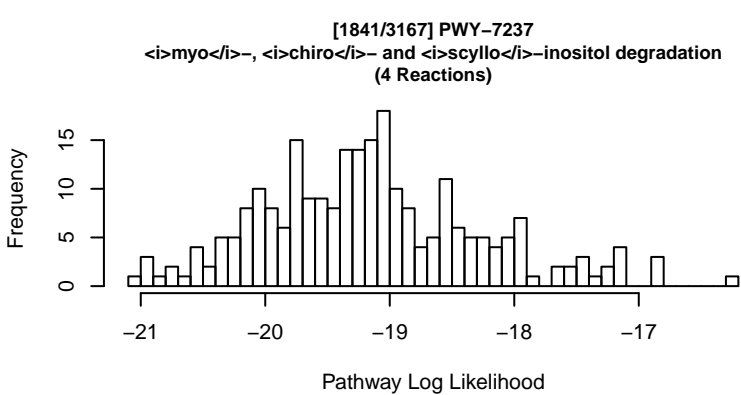
[1837/3167] PWY-7230
ubiquinol-6 biosynthesis from 4-aminobenzoate (yeast)
(8 Reactions)

Missing 1 Reaction(s) from Pathway.



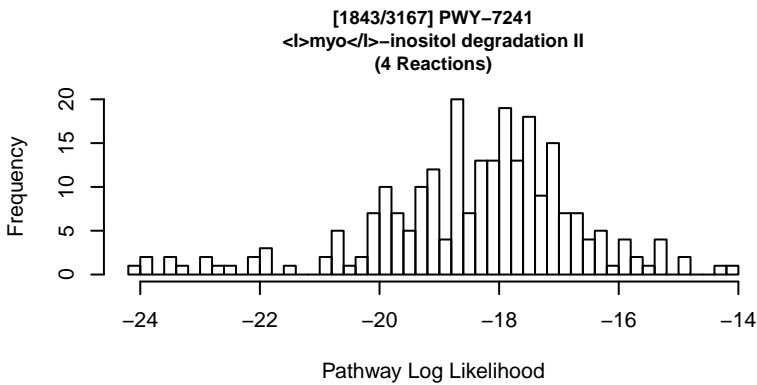
[1840/3167] PWY-7236
mycrocyclosin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



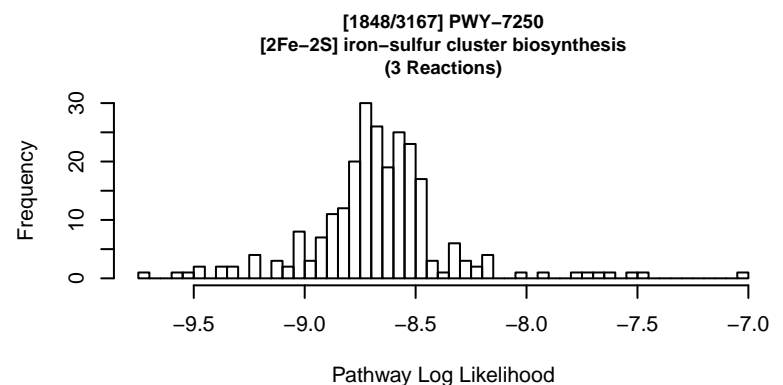
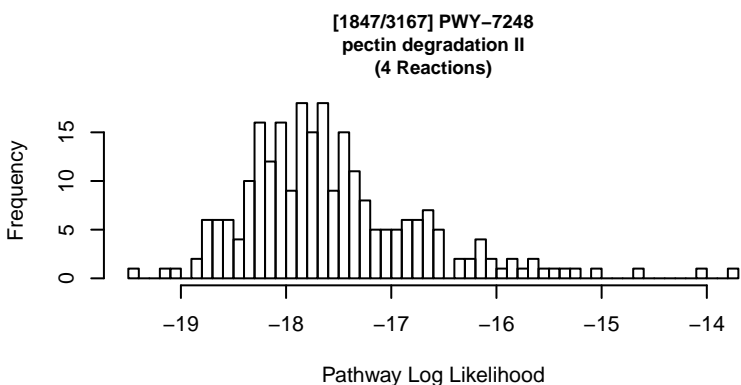
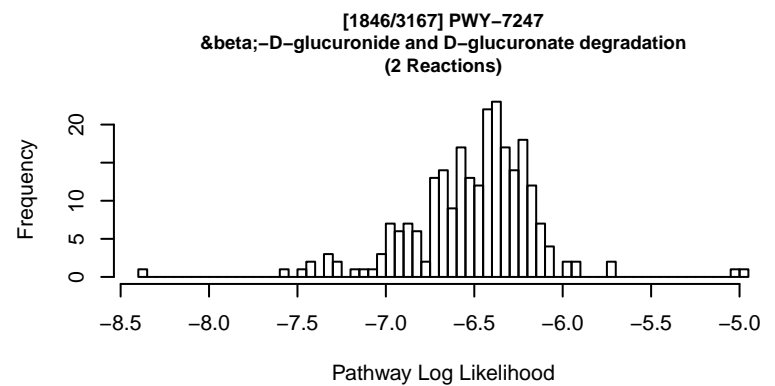
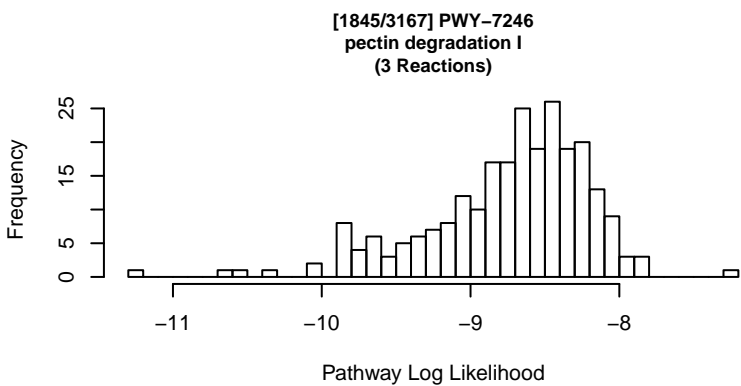
[1842/3167] PWY-7238
sucrose biosynthesis II
(10 Reactions)

Missing 1 Reaction(s) from Pathway.



[1844/3167] PWY-7242
D-fructuronate degradation
(6 Reactions)

Missing 2 Reaction(s) from Pathway.



[1849/3167] PWY-7251
pentacyclic triterpene biosynthesis
(10 Reactions)

Missing 9 Reaction(s) from Pathway.

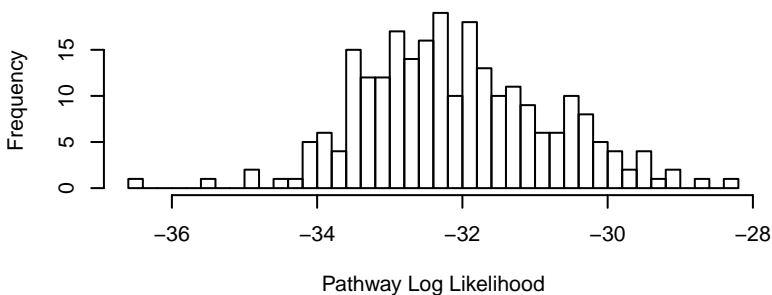
[1850/3167] PWY-7252
luteolinidin 5-<i>O</i>-glucoside biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1851/3167] PWY-7253
apigeninidin 5-*O*-glucoside biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1852/3167] PWY-7254
TCA cycle VII (acetate-producers)
(8 Reactions)



[1853/3167] PWY-7255
ergothioneine biosynthesis I (bacteria)
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1854/3167] PWY-7256
cyanidin diglucoside biosynthesis (acyl-glucose dependent)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

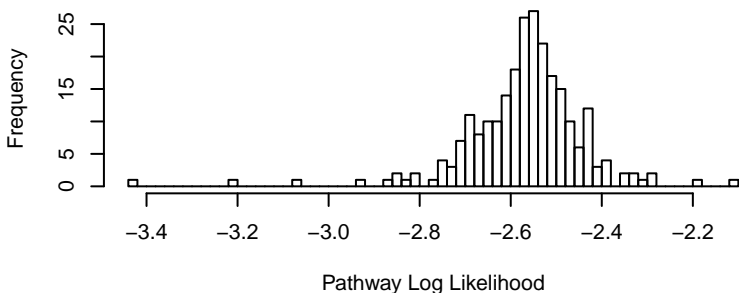
[1855/3167] PWY-7259
pelargonidin diglucoside biosynthesis (acyl-glucose dependent)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1856/3167] PWY-7260
delphinidin diglucoside biosynthesis (acyl-glucose dependent)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

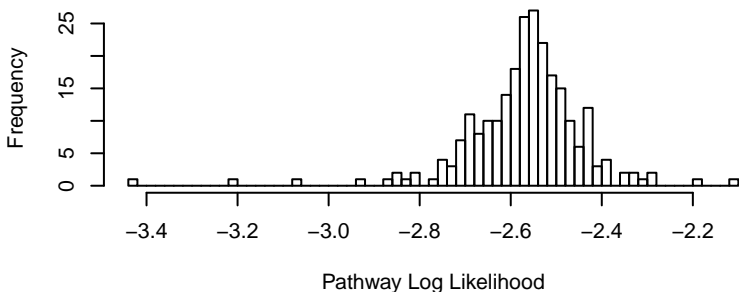
[1857/3167] PWY-7261
anthocyanidin 3-malylglucoside biosynthesis (acyl-glucose dependent)
(1 Reactions)



[1858/3167] PWY-7262
rose anthocyanin biosynthesis II (via cyanidin 3-*O*-β-D-glucoside)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1859/3167] PWY-7265
lampranthin biosynthesis
(1 Reactions)



[1860/3167] PWY-7267
anthocyanin biosynthesis (pelargonidin 3-*O*-glucoside)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

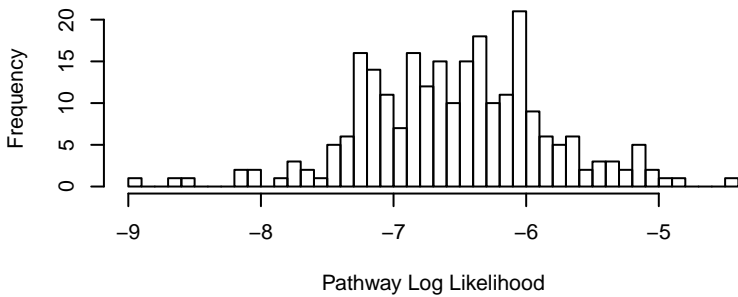
[1861/3167] PWY-7268
cytosolic NADPH production (yeast)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1862/3167] PWY-7269
mitochondrial NADPH production (yeast)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1863/3167] PWY-7270
L-methionine salvage cycle II (plants)
(1 Reactions)



[1864/3167] PWY-7274
D-cycloserine biosynthesis
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[1865/3167] PWY-7275
L-homophenylalanine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

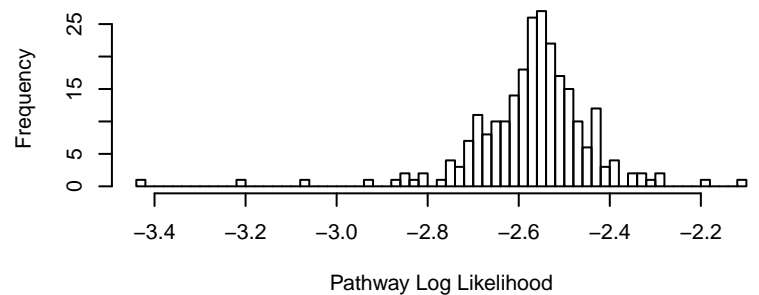
[1866/3167] PWY-7277
sphingolipid biosynthesis (mammals)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

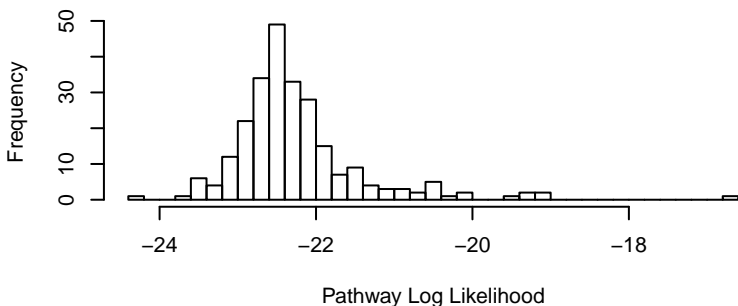
[1867/3167] PWY-7279
aerobic respiration II (cytochrome c) (yeast)
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1868/3167] PWY-7280
ternatin C3 biosynthesis
(1 Reactions)

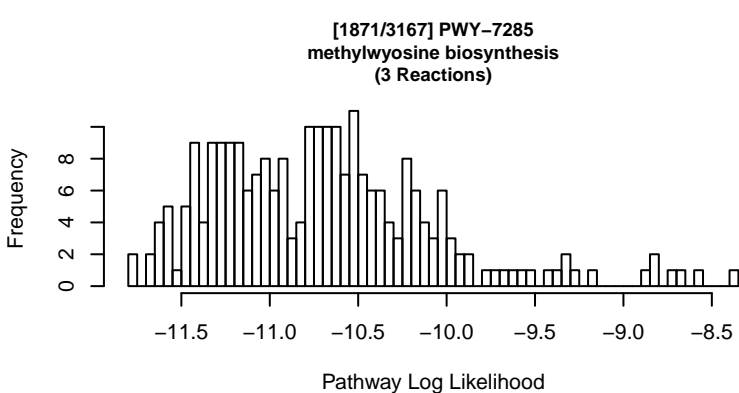


[1869/3167] PWY-7282
4-amino-2-methyl-5-diphosphomethylpyrimidine biosynthesis II
(6 Reactions)



[1870/3167] PWY-7283
wybutosine biosynthesis
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1872/3167] PWY-7286
7-(3-amino-3-carboxypropyl)-wyosine biosynthesis
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1873/3167] PWY-7287
novobiocin biosynthesis
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1874/3167] PWY-7288
fatty acid β -oxidation VII (yeast peroxisome)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1875/3167] PWY-7289
L-cysteine biosynthesis V (mycobacteria)
(2 Reactions)

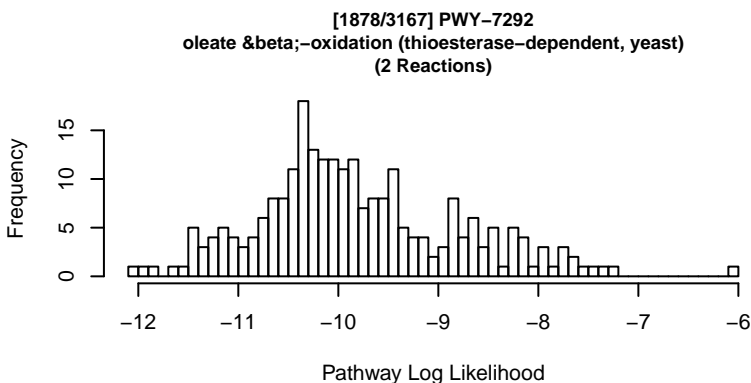
Missing ALL Reaction(s) from Pathway.

[1876/3167] PWY-7290
***Escherichia coli* serotype O:86 antigen biosynthesis**
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[1877/3167] PWY-7291
oleate β -oxidation (isomerase-dependent, yeast)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1879/3167] PWY-7294
D-xylose degradation IV
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

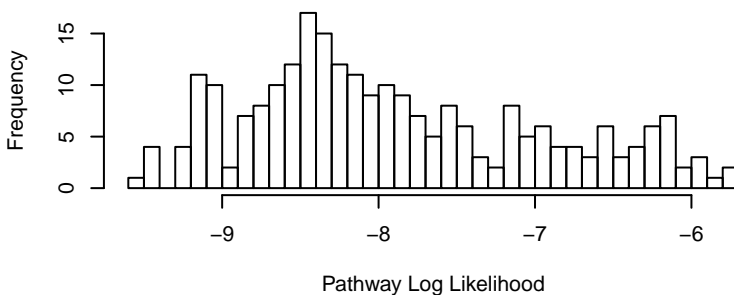
[1880/3167] PWY-7295
L-arabinose degradation IV
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

[1881/3167] PWY-7297
octopamine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1882/3167] PWY-7298
nevadensin biosynthesis
(2 Reactions)



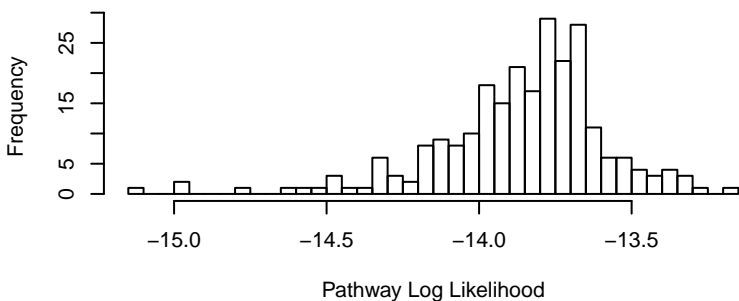
[1883/3167] PWY-7299
progesterone biosynthesis
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1884/3167] PWY-7300
ecdysone and 20-hydroxyecdysone biosynthesis
(8 Reactions)

Missing 4 Reaction(s) from Pathway.

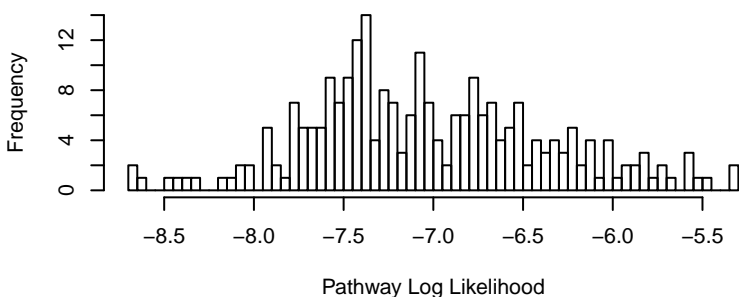
[1885/3167] PWY-7301
dTDP-4-O-demethyl-L-noviose biosynthesis
(5 Reactions)



[1886/3167] PWY-7303
4-hydroxy-3-prenylbenzoate biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

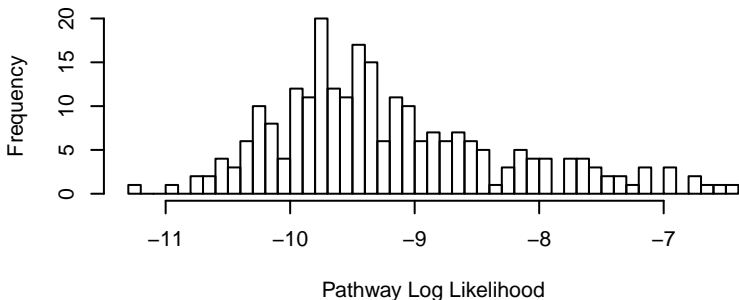
[1887/3167] PWY-7304
3-amino-4,7-dihydroxy-coumarin biosynthesis
(2 Reactions)



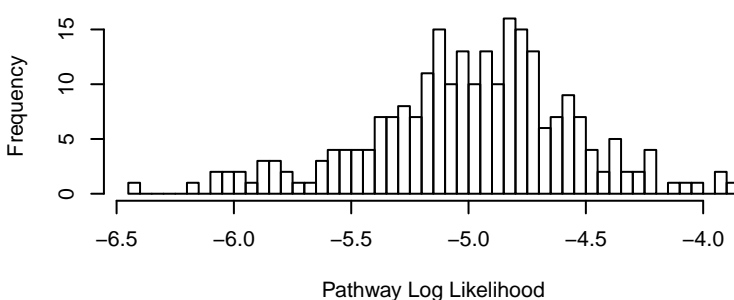
[1888/3167] PWY-7307
oleate β -oxidation (reductase-dependent, yeast)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1889/3167] PWY-7308
acrylonitrile degradation I
(2 Reactions)



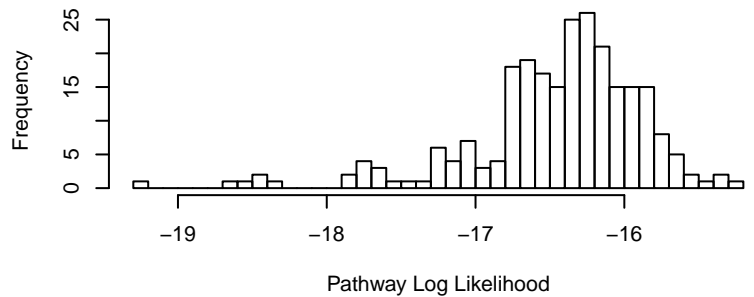
[1890/3167] PWY-7309
acrylonitrile degradation II
(1 Reactions)



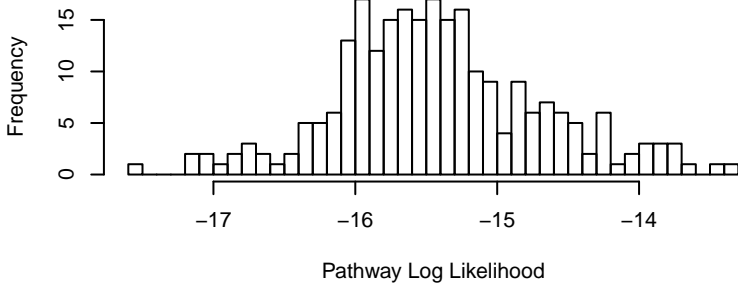
[1891/3167] PWY-7310
D-glucosaminat degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[1892/3167] PWY-7312
dTDP-β-D-fucofuranose biosynthesis
(4 Reactions)



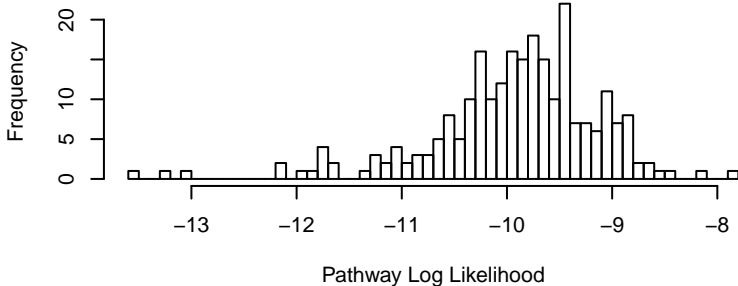
[1893/3167] PWY-7315
dTDP-<i>N</i>-acetylthomosamine biosynthesis
(4 Reactions)



[1894/3167] PWY-7316
dTDP-<i>N</i>-acetylivosamine biosynthesis
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1895/3167] PWY-7317
superpathway of dTDP-glucose-derived O-antigen building blocks biosynthesis
(2 Reactions)



[1896/3167] PWY-7318
dTDP-3-acetamido-3,6-dideoxy-α-D-glucose biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

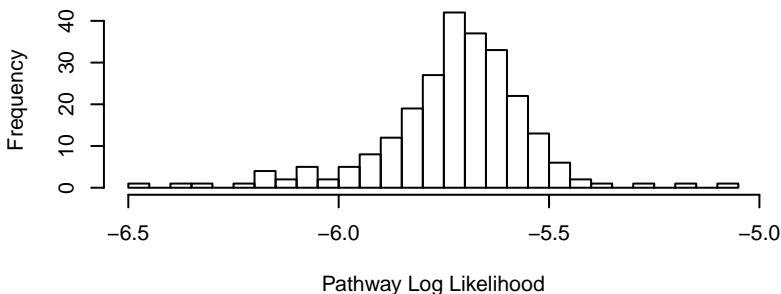
[1897/3167] PWY-7321
ecdysteroid metabolism (arthropods)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1898/3167] PWY-7325
salvigenin biosynthesis
(3 Reactions)

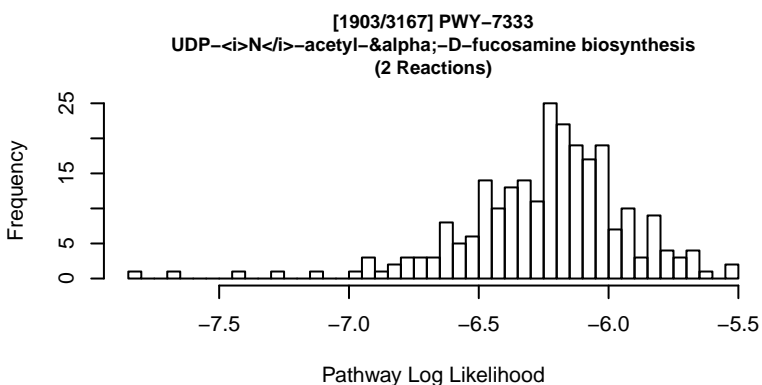
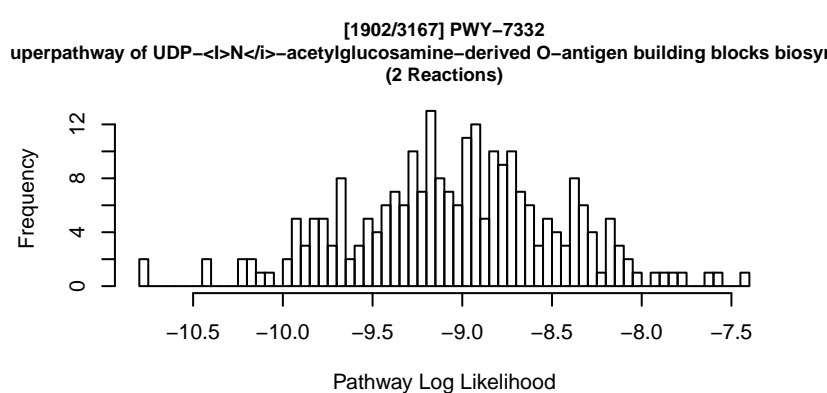
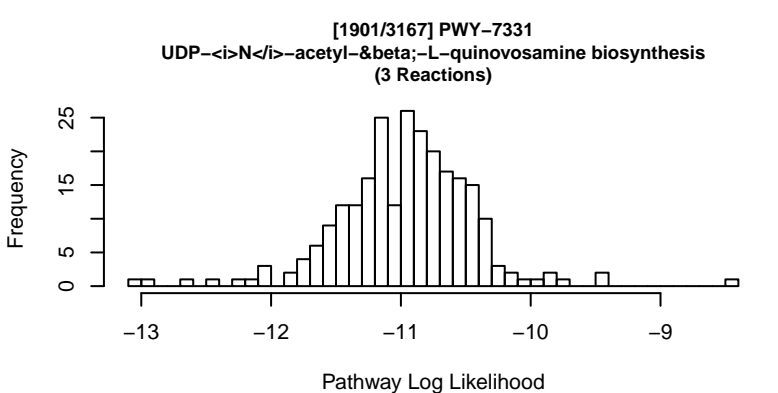
Missing 1 Reaction(s) from Pathway.

[1899/3167] PWY-7328
superpathway of UDP-glucose-derived O-antigen building blocks biosynthesis
(2 Reactions)



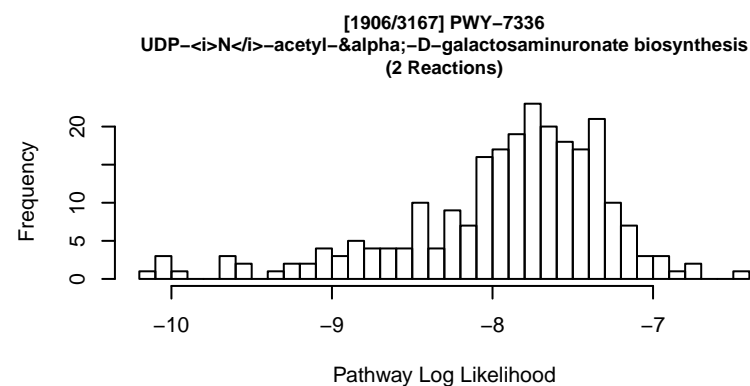
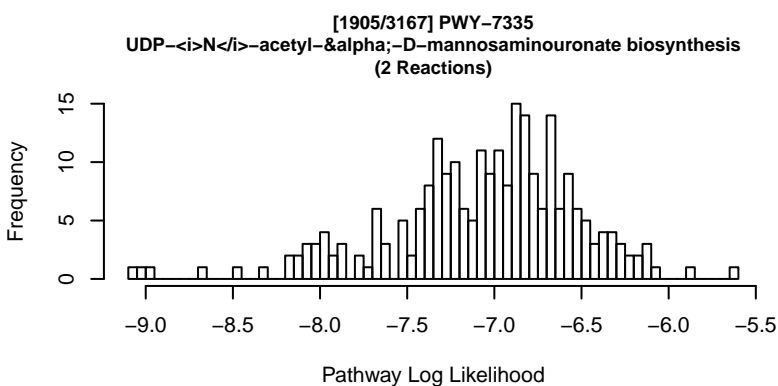
[1900/3167] PWY-7330
UDP-<i>N</i>-acetyl-β-L-fucosamine biosynthesis
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[1904/3167] PWY-7334
UDP-*N*-acetyl- α -D-quinovosamine biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[1907/3167] PWY-7337
10-*cis*-heptadecenoyl-CoA degradation (yeast)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1908/3167] PWY-7338
10-*trans*-heptadecenoyl-CoA degradation (reductase-dependent, yeast)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[1909/3167] PWY-7339
10-*trans*-heptadecenoyl-CoA degradation (MFE-dependent, yeast)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1910/3167] PWY-7340
9-*cis*, 11-*trans*-octadecadienoyl-CoA degradation (isomerase-dependent, yeast)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

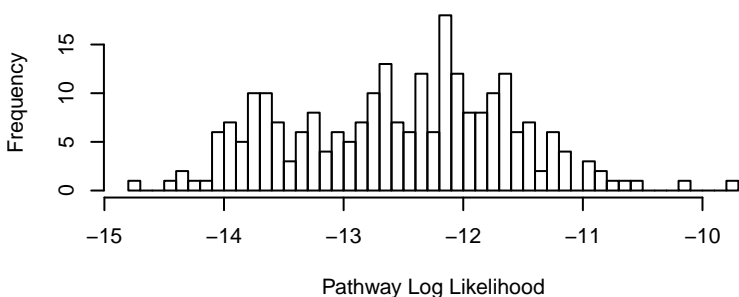
[1911/3167] PWY-7341
superpathway of hyoscyamine and scopolamine biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

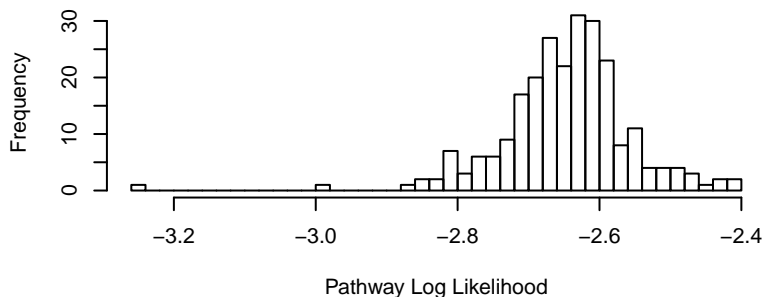
[1912/3167] PWY-7342
superpathway of nicotine biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

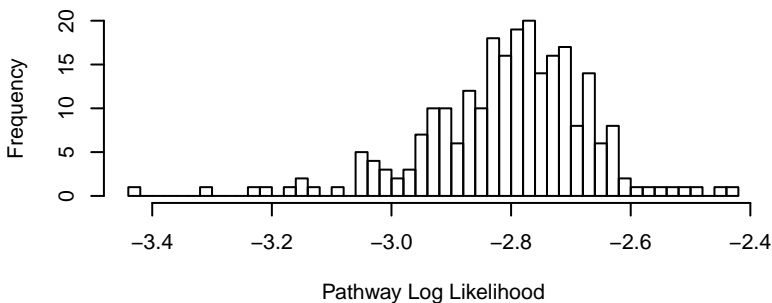
[1913/3167] PWY-7343
UDP-α-D-glucose biosynthesis
(3 Reactions)



[1914/3167] PWY-7344
UDP-α-D-galactose biosynthesis
(1 Reactions)



[1915/3167] PWY-7346
UDP-α-D-glucuronate biosynthesis (from UDP-glucose)
(1 Reactions)



[1916/3167] PWY-7347
sucrose biosynthesis III
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1917/3167] PWY-735
jasmonic acid biosynthesis
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

[1918/3167] PWY-7351
pyruvate fermentation to opines
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[1919/3167] PWY-7352
daunorubicin biosynthesis
(13 Reactions)

Missing 3 Reaction(s) from Pathway.

[1920/3167] PWY-7354
aclacinomycin biosynthesis
(11 Reactions)

Missing 5 Reaction(s) from Pathway.

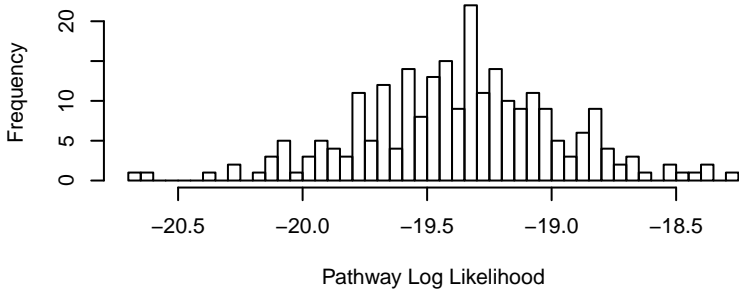
[1921/3167] PWY-7355
doxorubicin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1922/3167] PWY-7356
thiamine diphosphate salvage IV (yeast)
(7 Reactions)

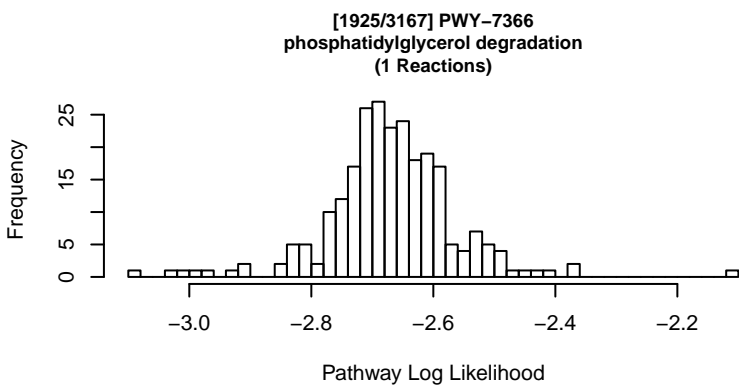
Missing 1 Reaction(s) from Pathway.

[1923/3167] PWY-7357
thiamine phosphate formation from pyrithiamine and oxythiamine (yeast)
(5 Reactions)



[1924/3167] PWY-7363
papaverine biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.



[1926/3167] PWY-7367
phosphatidylcholine resynthesis via glycerophosphocholine
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

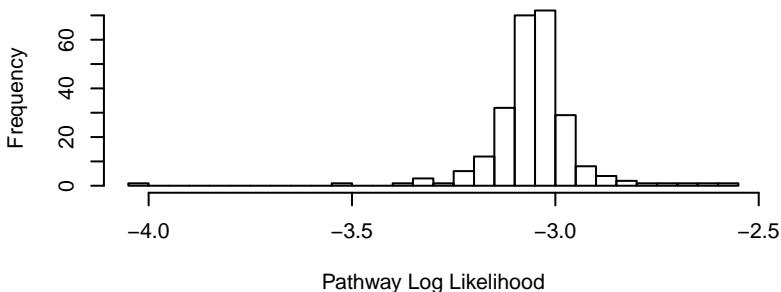
[1927/3167] PWY-7369
thiamine triphosphate metabolism
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

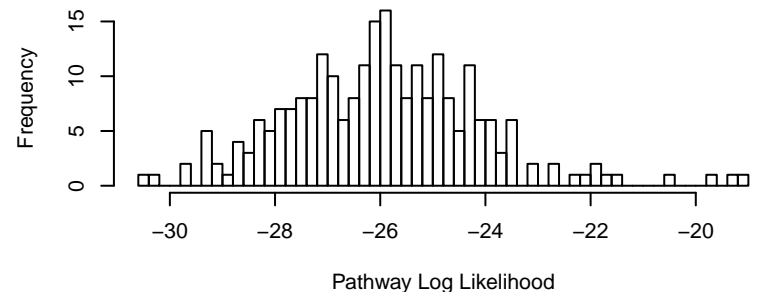
[1928/3167] PWY-7371
1,4-dihydroxy-6-naphthoate biosynthesis II
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1929/3167] PWY-7372
demethylmenaquinol-6 biosynthesis II
(1 Reactions)



[1930/3167] PWY-7374
1,4-dihydroxy-6-naphthoate biosynthesis I
(5 Reactions)



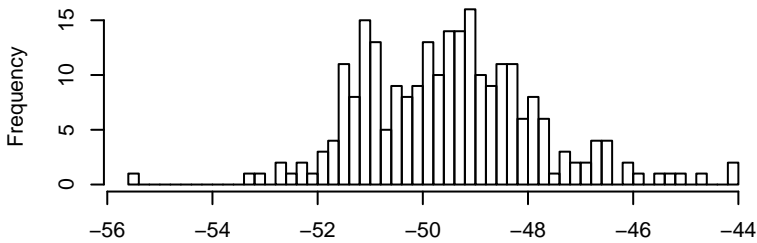
[1931/3167] PWY-7375
mRNA capping I
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1932/3167] PWY-7376
cob(II)yrinate *cob*-diamide biosynthesis II (late cobalt incorporation)
(9 Reactions)

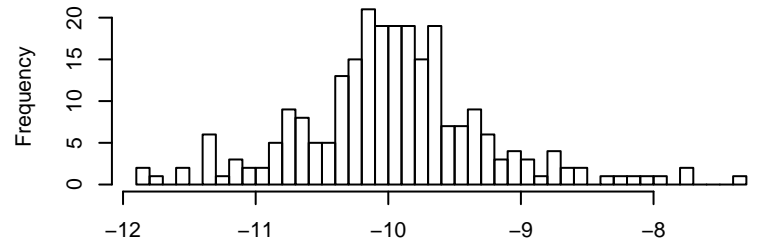
Zeros/-Inf for reaction(s) in Pathway

[1933/3167] PWY-7377
cob(II)yrinate *cob*-diamide biosynthesis I (early cobalt insertion)
(11 Reactions)



Pathway Log Likelihood

[1934/3167] PWY-7378
aminopropanol phosphate biosynthesis II
(2 Reactions)



Pathway Log Likelihood

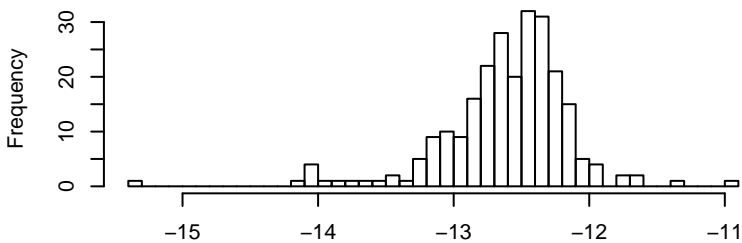
[1935/3167] PWY-7379
mRNA capping II
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1936/3167] PWY-7380
biotin biosynthesis from 8-amino-7-oxononanoate II
(2 Reactions)

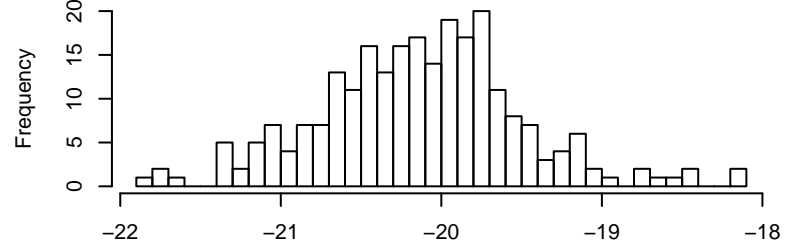
Zeros/-Inf for reaction(s) in Pathway

[1937/3167] PWY-7382
lipoate biosynthesis and incorporation IV (yeast)
(4 Reactions)



Pathway Log Likelihood

[1938/3167] PWY-7383
anaerobic energy metabolism (invertebrates, cytosol)
(6 Reactions)



Pathway Log Likelihood

[1939/3167] PWY-7384
anaerobic energy metabolism (invertebrates, mitochondrial)
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

[1940/3167] PWY-7385
1,3-propanediol biosynthesis (engineered)
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

[1941/3167] PWY-7387
hypotaurine degradation
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1942/3167] PWY-7388
octanoyl-[acyl-carrier protein] biosynthesis (mitochondria, yeast)
(6 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1943/3167] PWY-7391
isoprene biosynthesis II (engineered)
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

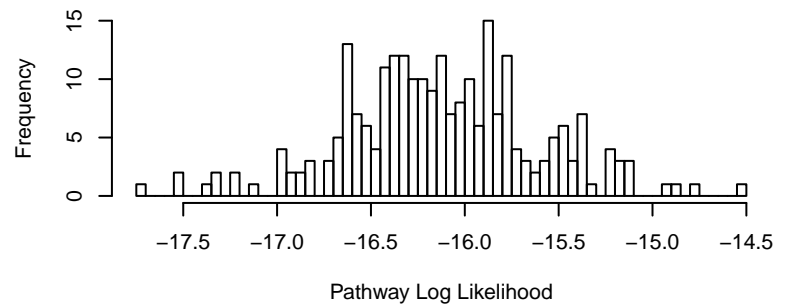
[1944/3167] PWY-7392
taxadiene biosynthesis (engineered)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[1945/3167] PWY-7394
urate conversion to allantoin II
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1946/3167] PWY-7395
D-galactosamine and *N*-acetyl-D-galactosamine degradation
(4 Reactions)



[1947/3167] PWY-7396
butanol and isobutanol biosynthesis (engineered)
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

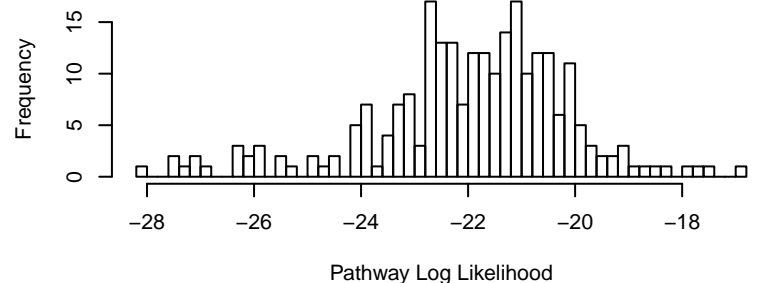
[1948/3167] PWY-7397
naringenin biosynthesis (engineered)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1949/3167] PWY-7398
coumarins biosynthesis (engineered)
(8 Reactions)

Missing 3 Reaction(s) from Pathway.

[1950/3167] PWY-7399
methylphosphonate degradation II
(4 Reactions)



[1951/3167] PWY-7400
L-arginine biosynthesis IV (archaea)
(9 Reactions)

Missing 2 Reaction(s) from Pathway.

[1952/3167] PWY-7401
crotonate fermentation (to acetate and cyclohexane carboxylate)
(12 Reactions)

Missing 4 Reaction(s) from Pathway.

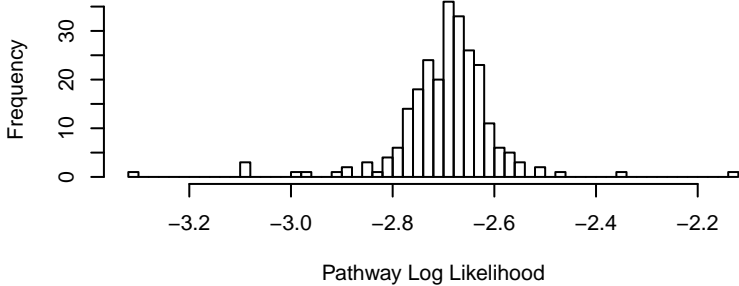
[1953/3167] PWY-7402
benzoate fermentation (to acetate and cyclohexane carboxylate)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1954/3167] PWY-7403
tetramethylpyrazine degradation
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1955/3167] PWY-7404
ceramide phosphoethanolamine biosynthesis
(1 Reactions)



[1956/3167] PWY-7405
aurachin RE biosynthesis
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1957/3167] PWY-7407
aurachin A, B, C and D biosynthesis
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1958/3167] PWY-7409
phospholipid remodeling (phosphatidylethanolamine, yeast)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1959/3167] PWY-741
<l>p</l>-cymene degradation to <l>p</l>-cumate
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1960/3167] PWY-7410
ipsdienol biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1961/3167] PWY-7411
phosphatidate biosynthesis (yeast)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[1962/3167] PWY-7412
mycinamicin biosynthesis
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1963/3167] PWY-7413
dTDP-6-deoxy-α-D-allose biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[1964/3167] PWY-7414
dTDP-α-D-mycaminose biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

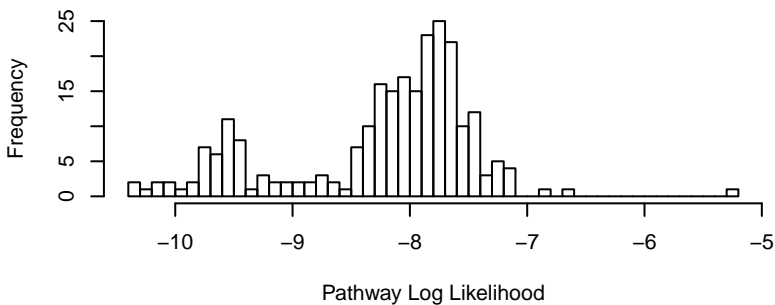
[1965/3167] PWY-7415
tylosin biosynthesis
(8 Reactions)

Missing 4 Reaction(s) from Pathway.

[1966/3167] PWY-7416
phospholipid remodeling (phosphatidylcholine, yeast)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1967/3167] PWY-7417
phospholipid remodeling (phosphatidate, yeast)
(2 Reactions)



[1968/3167] PWY-7419
FR-900098 and FR-33289 antibiotics biosynthesis
(10 Reactions)

Missing 1 Reaction(s) from Pathway.

[1969/3167] PWY-7420
monoacylglycerol metabolism (yeast)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1970/3167] PWY-7421
narbomycin, pikromycin and novapikromycin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1971/3167] PWY-7422
methymycin, neomethymycin and novamethymycin biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1972/3167] PWY-7423
bombykol biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1973/3167] PWY-7424
sterol:steryl ester interconversion (yeast)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

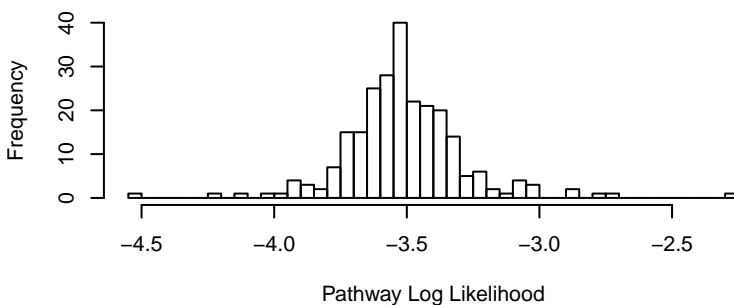
[1974/3167] PWY-7425
2-chloroacrylate degradation I
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[1975/3167] PWY-7426
complex *N*-linked glycan biosynthesis (vertebrates)
(10 Reactions)

Missing 7 Reaction(s) from Pathway.

[1976/3167] PWY-7428
2-chloroacrylate degradation II
(1 Reactions)



[1977/3167] PWY-7429
arsenite to oxygen electron transfer (via azurin)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1978/3167] PWY-743
thiocyanate degradation II
(2 Reactions)

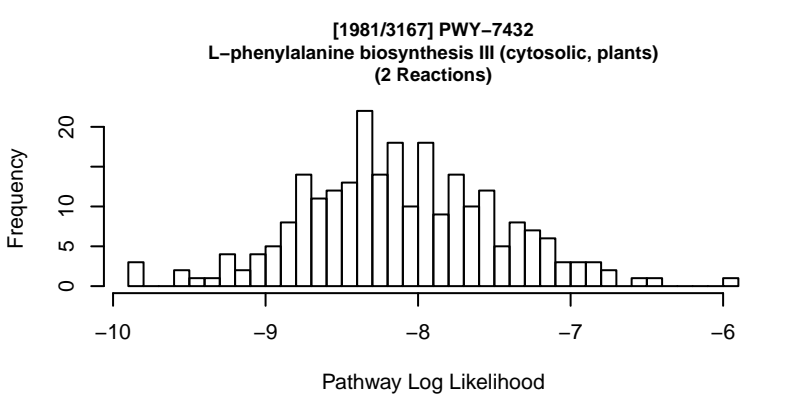
Missing ALL Reaction(s) from Pathway.

[1979/3167] PWY-7430
indole degradation to anthranil and anthranilate
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[1980/3167] PWY-7431
aromatic biogenic amine degradation (bacteria)
(7 Reactions)

Missing 3 Reaction(s) from Pathway.



[1982/3167] PWY-7433
mucin core 1 and core 2 α -glycosylation
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[1983/3167] PWY-7434
terminal α -glycans residues modification (via type 2 precursor disaccharide)
(6 Reactions)

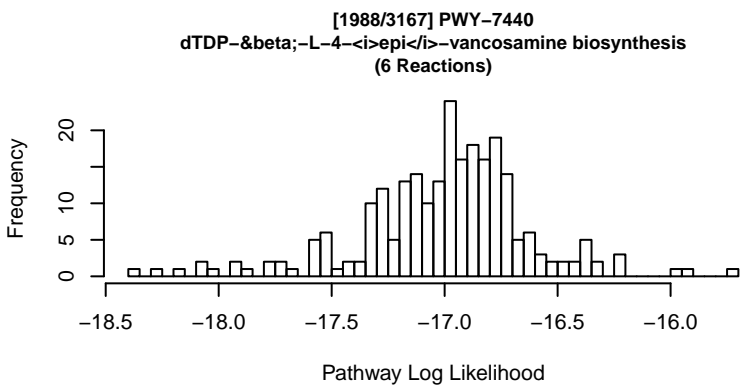
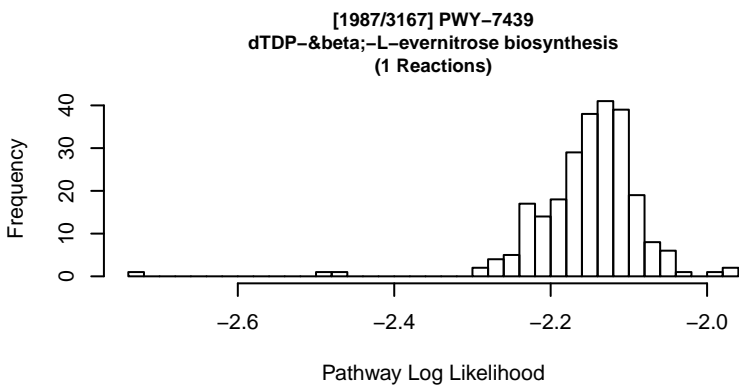
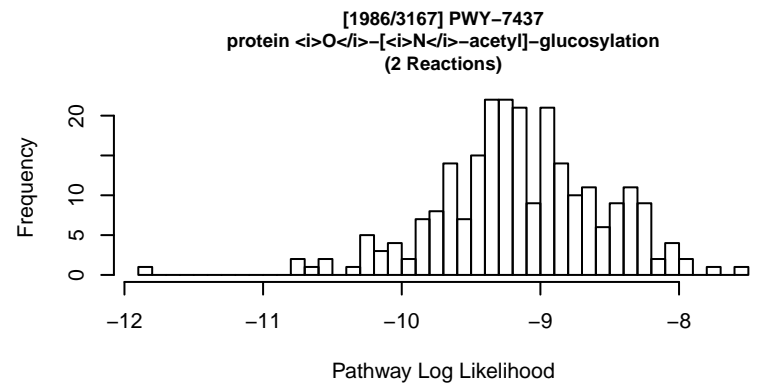
Missing 4 Reaction(s) from Pathway.

[1984/3167] PWY-7435
mucin core 3 and core 4 α -glycosylation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1985/3167] PWY-7436
vitamin E biosynthesis (tocotrienols)
(4 Reactions)

Missing 3 Reaction(s) from Pathway.



[1989/3167] PWY-7442
drosoppterin and aurodrosopterin biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

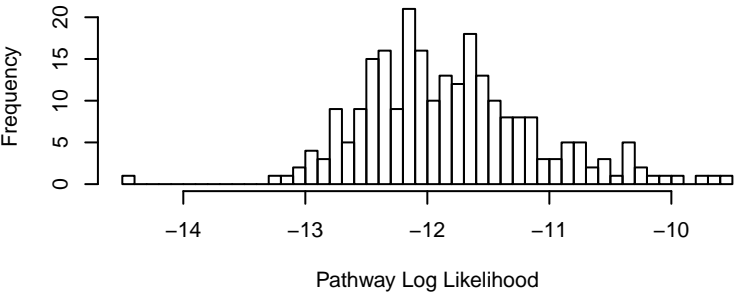
[1990/3167] PWY-7443
(4S)-carvone biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[1991/3167] PWY-7444
luteolin triglucuronide biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[1992/3167] PWY-7445
luteolin triglucuronide degradation
(3 Reactions)



[1993/3167] PWY-7446
sulfoquinovose degradation I
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[1994/3167] PWY-7447
2-aminoethylphosphonate degradation III
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[1995/3167] PWY-7448
galloylated catechin biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1996/3167] PWY-7449
acylated cyanidin galactoside biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[1997/3167] PWY-7450
anthocyanidin modification (<i>Arabidopsis</i>)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[1998/3167] PWY-7452
cyanidin dimalonylglucoside biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[1999/3167] PWY-7455
allopregnanolone biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

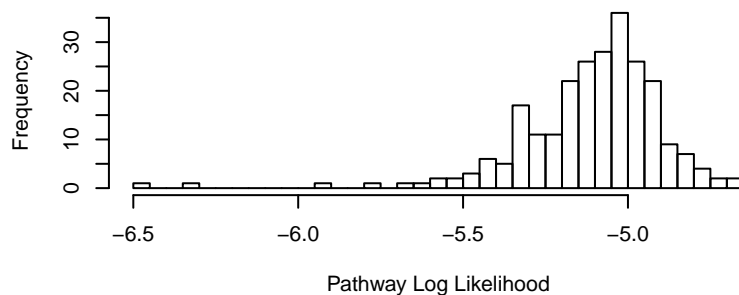
[2000/3167] PWY-7456
β- (1,4)-mannan degradation
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

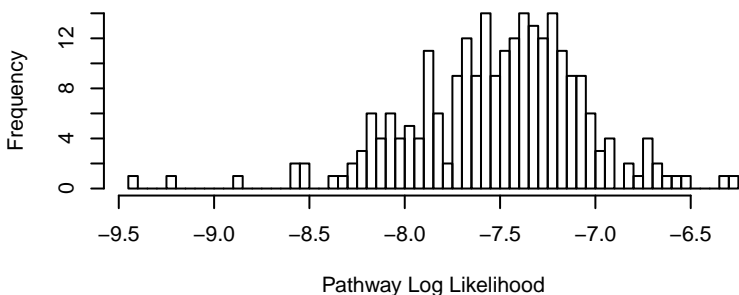
[2001/3167] PWY-7457
sulfite oxidation V (SoeABC)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

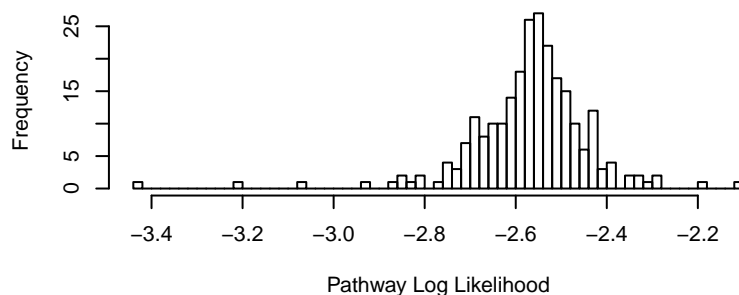
[2002/3167] PWY-7458
violodelphin biosynthesis
(2 Reactions)



[2003/3167] PWY-7459
kojibiose degradation
(2 Reactions)



[2004/3167] PWY-7460
2-*O*-acetyl-3-*O*-*trans*-coularic acid biosynthesis
(1 Reactions)



[2005/3167] PWY-7461
hydroxycinnamate sugar acid ester biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

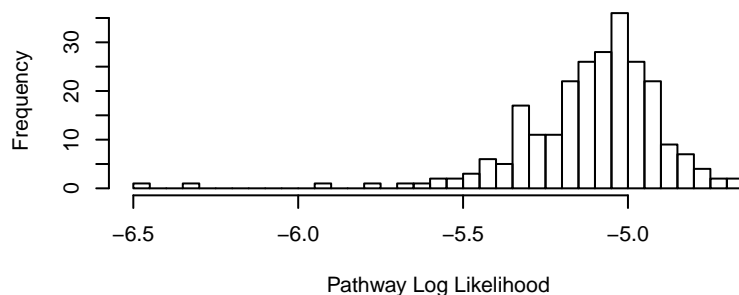
[2006/3167] PWY-7462
3,3'-disulfanediyldipropionate degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2007/3167] PWY-7463
***N*-methylanthraniloyl- β -D-glucopyranose biosynthesis**
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

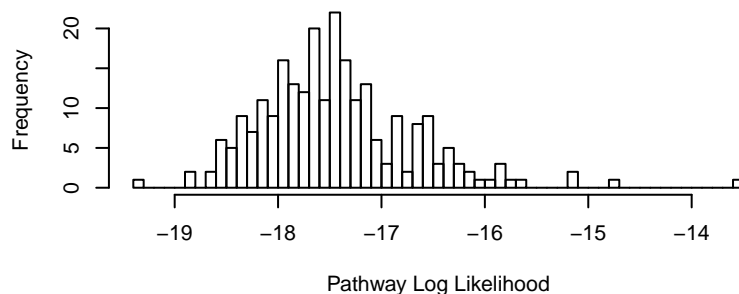
[2008/3167] PWY-7464
cyanidin 3,7-diglucoside polyacylation biosynthesis
(2 Reactions)



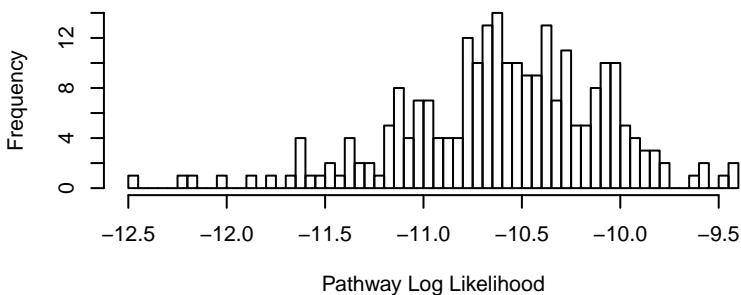
[2009/3167] PWY-7465
3,3'-thiodipropionate degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2010/3167] PWY-7466
acetone degradation III (to propane-1,2-diol)
(3 Reactions)



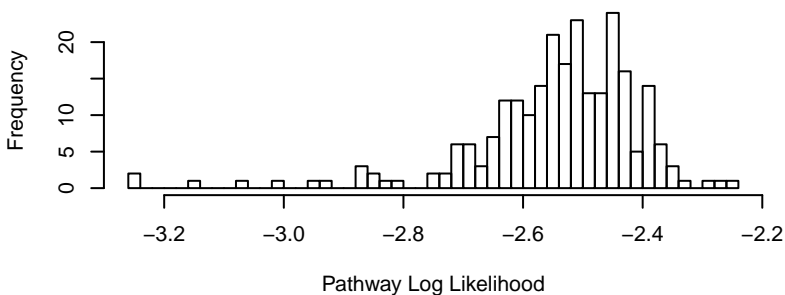
[2011/3167] PWY-7467
4-amino-2,4,6-trideoxy- α -D-galactosyl-diphospho-*cis*-undecap
(3 Reactions)



[2013/3167] PWY-7469
gentisate degradation II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2012/3167] PWY-7468
benzoyl- β -D-glucopyranose biosynthesis
(1 Reactions)



[2014/3167] PWY-7470
phosphatidylcholine biosynthesis VII
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2015/3167] PWY-7471
D-carnitine degradation I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

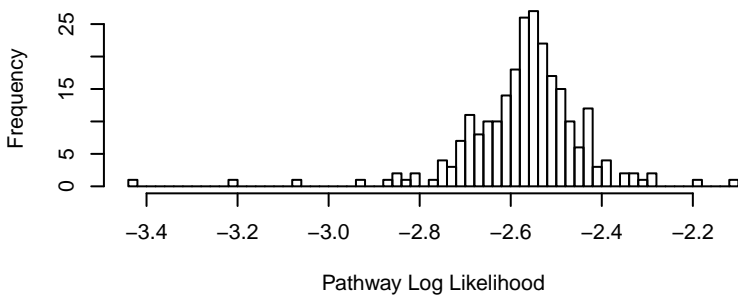
[2016/3167] PWY-7472
D-carnitine degradation II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

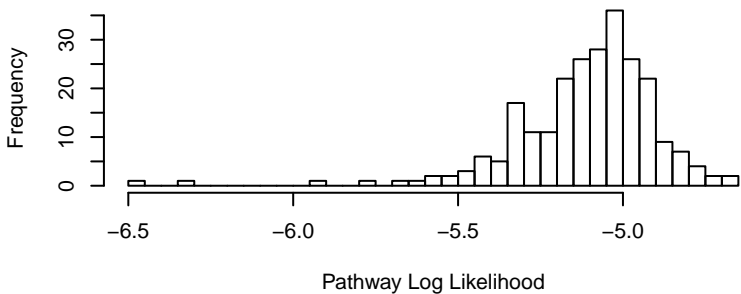
[2017/3167] PWY-7473
avenacin A-1 biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2018/3167] PWY-7474
avenacin A-2 biosynthesis
(1 Reactions)



[2019/3167] PWY-7475
des-methyl avenacin A-1 biosynthesis
(2 Reactions)



[2020/3167] PWY-7477
momilactone A biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2021/3167] PWY-7478
oryzalexin D and E biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[2022/3167] PWY-7480
2,3-dihydroxybenzoate degradation
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2023/3167] PWY-7481
oryzalide A biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2024/3167] PWY-7482
cyclooctatin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2025/3167] PWY-7483
elloramycin biosynthesis
(8 Reactions)

Missing 5 Reaction(s) from Pathway.

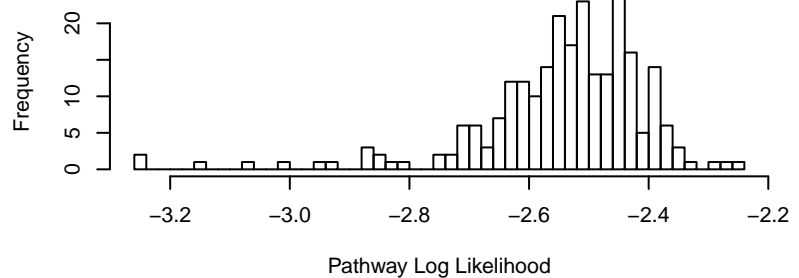
[2026/3167] PWY-7484
phytocassanes biosynthesis, shared reactions
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

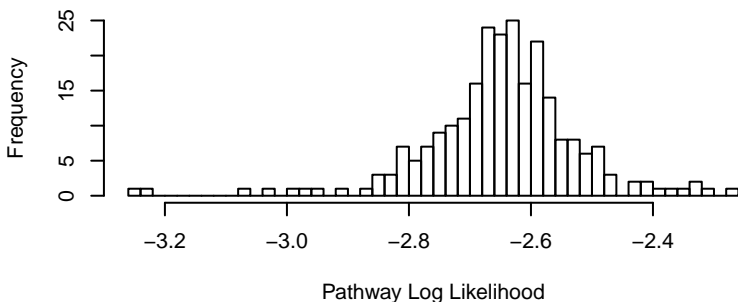
[2027/3167] PWY-7485
tetracenomycin C biosynthesis
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[2028/3167] PWY-7487
(+)-secoisolariciresinol diglucoside biosynthesis
(1 Reactions)



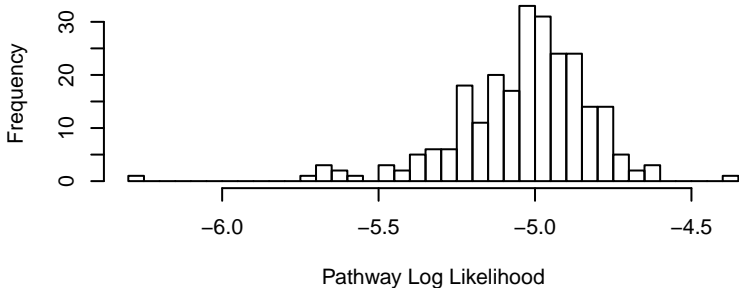
[2029/3167] PWY-7489
oryzalexin A, B, and C biosynthesis
(1 Reactions)



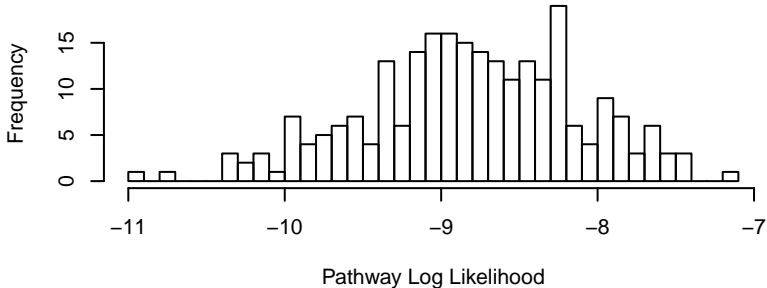
[2030/3167] PWY-7490
patulin biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

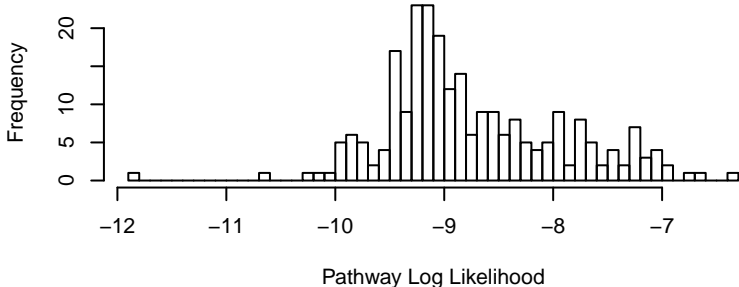
[2031/3167] PWY-7491
podophyllotoxin glucosides metabolism
(2 Reactions)



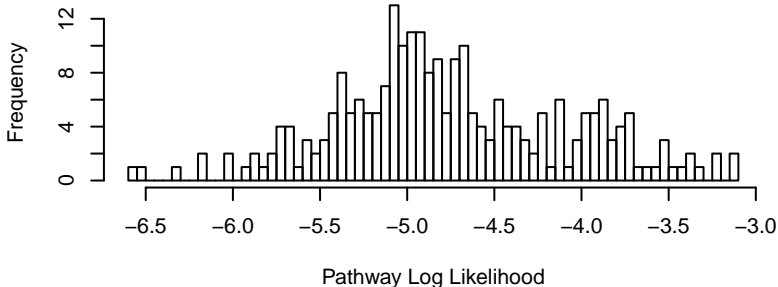
[2032/3167] PWY-7492
paspaline biosynthesis
(2 Reactions)



[2033/3167] PWY-7493
paxilline and diprenylpaxilline biosynthesis
(2 Reactions)



[2034/3167] PWY-7494
choline degradation IV
(1 Reactions)



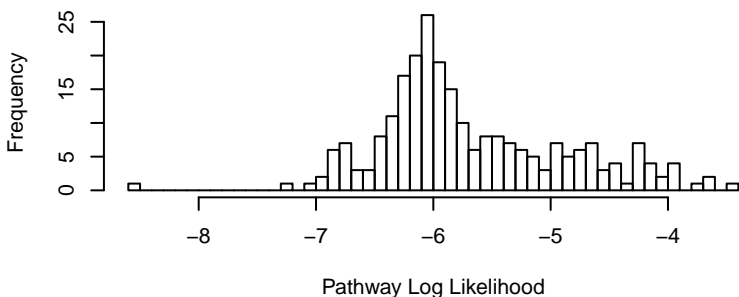
[2035/3167] PWY-7495
gossypetin metabolism
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2036/3167] PWY-7496
linuron degradation
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[2037/3167] PWY-7497
3β-hydroxysesquiterpene lactone biosynthesis
(1 Reactions)



[2038/3167] PWY-7498
phenylpropanoids methylation (ice plant)
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[2039/3167] PWY-7501
phosphatidylserine biosynthesis I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2040/3167] PWY-7506
phosphatidylserine biosynthesis II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2041/3167] PWY-7507
chelerythrine biosynthesis
(8 Reactions)

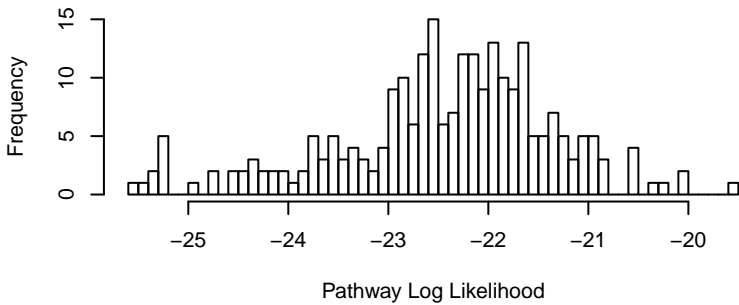
[2042/3167] PWY-7509
cardiolipin and phosphatidylethanolamine biosynthesis (<i>Xanthomonas</i>)
(1 Reactions)

Missing 7 Reaction(s) from Pathway.

Zeros/-Inf for reaction(s) in Pathway

[2043/3167] PWY-7510
rhizoctin A and B biosynthesis
(6 Reactions)

[2044/3167] PWY-7511
protein ubiquitination
(5 Reactions)



Missing 1 Reaction(s) from Pathway.

[2045/3167] PWY-7512
3,5,6-trichloro-2-pyridinol degradation
(2 Reactions)

[2046/3167] PWY-7513
flaviolin dimer and mompain biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

Missing 2 Reaction(s) from Pathway.

[2047/3167] PWY-7514
L-tyrosine degradation IV (to 4-methylphenol)
(6 Reactions)

[2048/3167] PWY-7515
<i>trans</i>-3-hydroxy-L-proline degradation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

Zeros/-Inf for reaction(s) in Pathway

[2049/3167] PWY-7516
L-lyxonate degradation
(3 Reactions)

[2050/3167] PWY-7517
brassicicene C biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

Missing 1 Reaction(s) from Pathway.

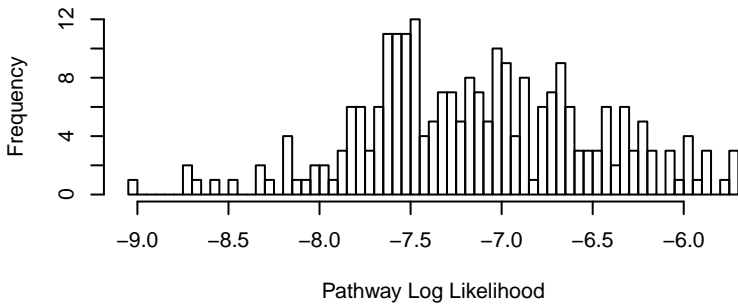
[2051/3167] PWY-7518
atromentin biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2052/3167] PWY-7520
terrequinone A biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2053/3167] PWY-7521
3-(4-sulfophenyl)butanoate degradation
(2 Reactions)



[2054/3167] PWY-7523
L-arginine degradation XII
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2055/3167] PWY-7524
mevalonate pathway III (Thermoplasma)
(9 Reactions)

Missing 3 Reaction(s) from Pathway.

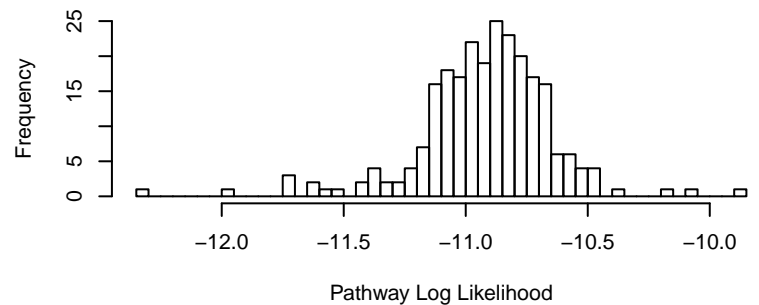
[2056/3167] PWY-7525
fumitremorgin C biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

[2057/3167] PWY-7526
fumitremorgin A biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

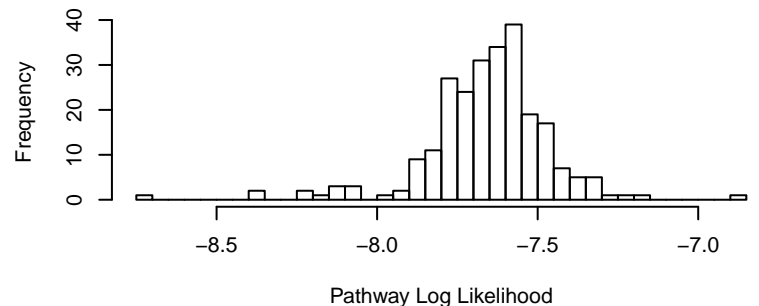
[2058/3167] PWY-7529
CMP-N-acetyl-7-O-acetylneuraminate biosynthesis
(4 Reactions)



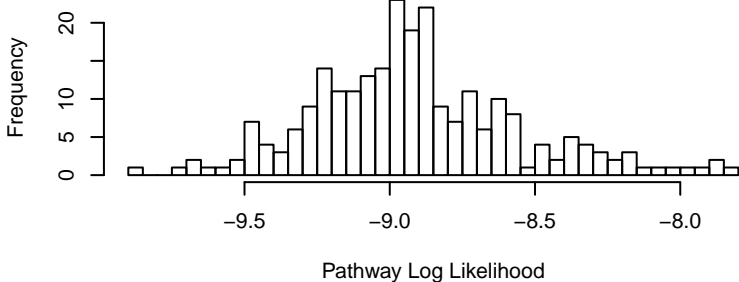
[2059/3167] PWY-7530
***Escherichia coli* serotype O:104 O antigen biosynthesis**
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[2060/3167] PWY-7531
mannojirimycin biosynthesis
(3 Reactions)



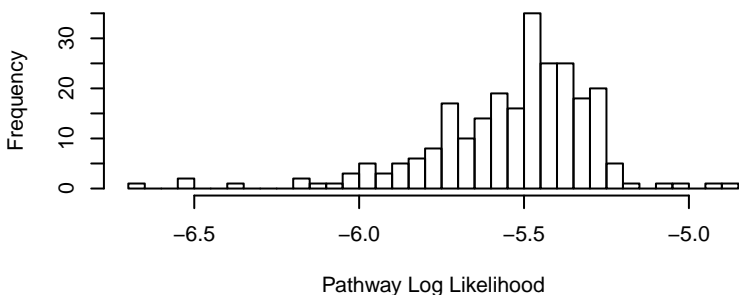
[2061/3167] PWY-7532
acetylazonalenin biosynthesis
(3 Reactions)



[2062/3167] PWY-7533
gliotoxin biosynthesis
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

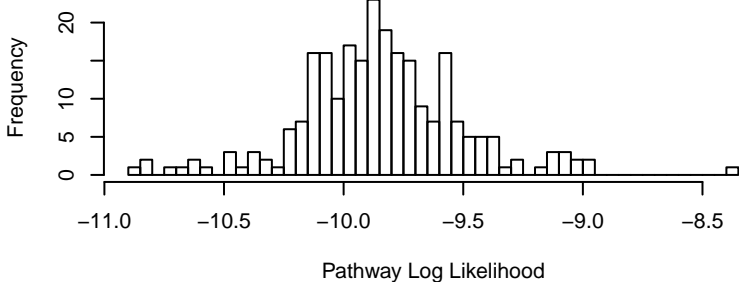
[2063/3167] PWY-7534
gliotoxin inactivation
(2 Reactions)



[2064/3167] PWY-7535
lovastatin biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

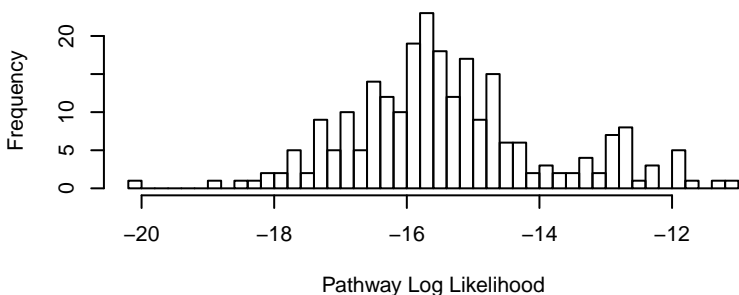
[2065/3167] PWY-7536
2-amino-3-hydroxycyclopent-2-enone biosynthesis
(2 Reactions)



[2066/3167] PWY-7539
6-hydroxymethyl-dihydropterin diphosphate biosynthesis III (Chlamydia)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

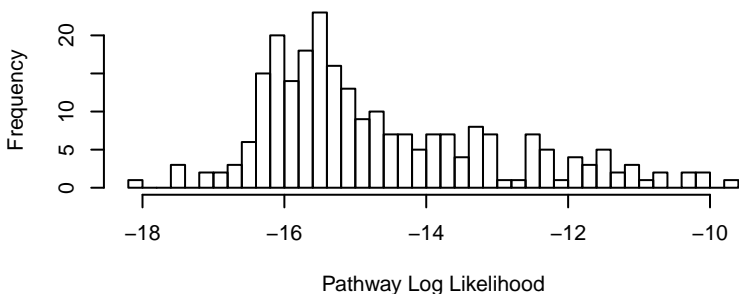
[2067/3167] PWY-7540
aflatrem biosynthesis
(3 Reactions)



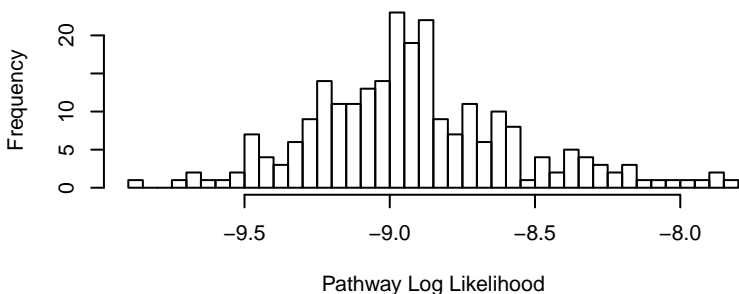
[2068/3167] PWY-7541
1,2-propanediol biosynthesis from lactate (engineered)
(4 Reactions)

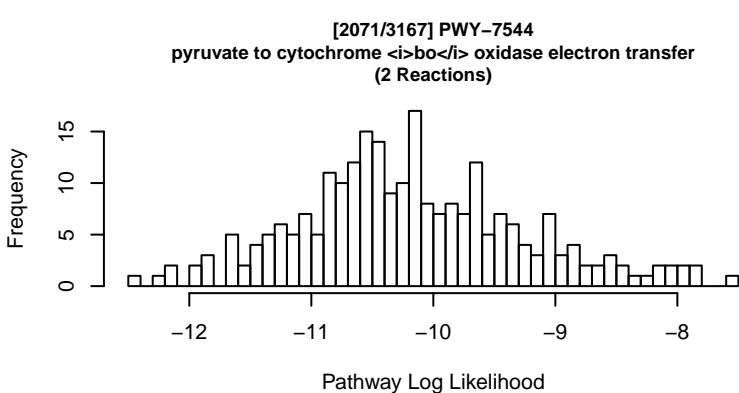
Missing 1 Reaction(s) from Pathway.

[2069/3167] PWY-7542
fumiquinazoline D biosynthesis
(3 Reactions)



[2070/3167] PWY-7543
5-<i>N</i>-acetylardeemin biosynthesis
(3 Reactions)





[2072/3167] PWY-7545
pyruvate to cytochrome *bd* oxidase electron transfer
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2073/3167] PWY-7546
diphthamide biosynthesis II (eukaryotes)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2074/3167] PWY-7547
prodigiosin biosynthesis
(10 Reactions)

Missing 3 Reaction(s) from Pathway.

[2075/3167] PWY-7549
asperlicin E biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2076/3167] PWY-7550
ergothioneine biosynthesis II (fungi)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2077/3167] PWY-7552
heme *b* biosynthesis III (from siroheme)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

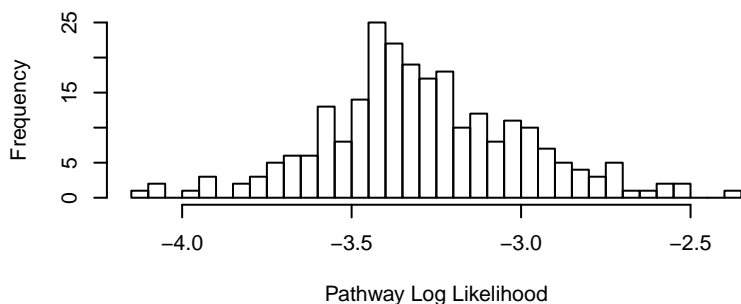
[2078/3167] PWY-7554
heme *d*₁ biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2079/3167] PWY-7555
 α -cyclopiazonate biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

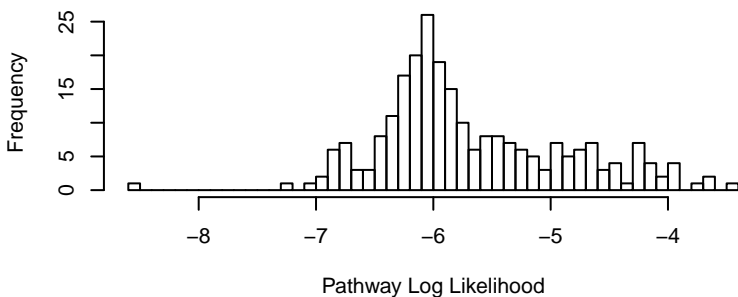
[2080/3167] PWY-7556
(-)-microperfurane biosynthesis
(1 Reactions)



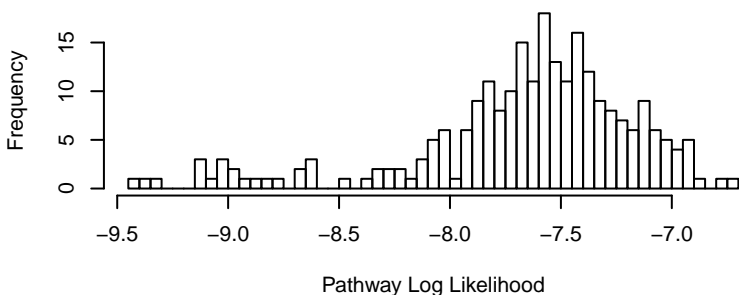
[2081/3167] PWY-7557
 (–)-dehydrodiconiferyl alcohol degradation
 (4 Reactions)

Missing 1 Reaction(s) from Pathway.

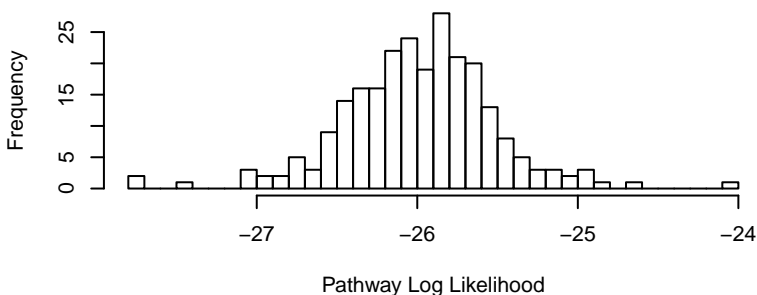
[2082/3167] PWY-7558
 α ;-cyclopiazonate detoxification
 (1 Reactions)



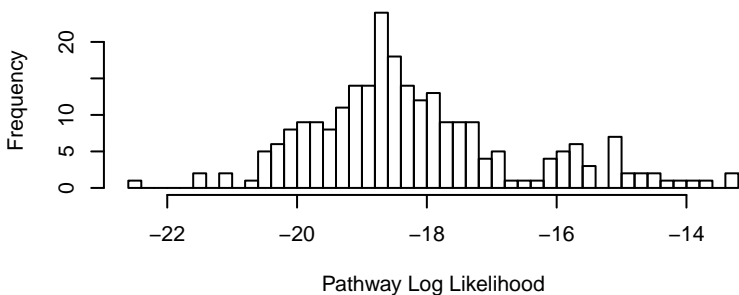
[2083/3167] PWY-7559
 glutathione degradation (DUG pathway – yeast)
 (2 Reactions)



[2084/3167] PWY-7560
 methylerythritol phosphate pathway II
 (8 Reactions)



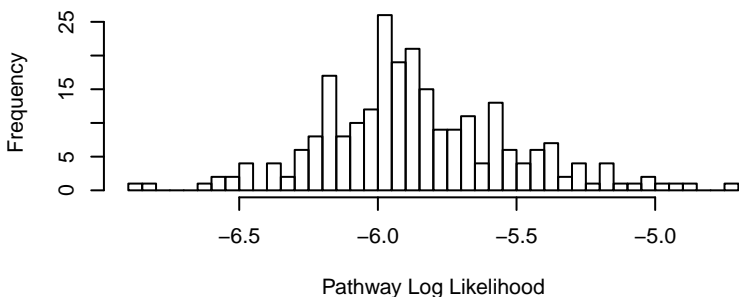
[2085/3167] PWY-7561
 tenellin biosynthesis
 (4 Reactions)



[2086/3167] PWY-7562
 3,6-anhydro- α ;-L-galactopyranose degradation
 (7 Reactions)

Missing 3 Reaction(s) from Pathway.

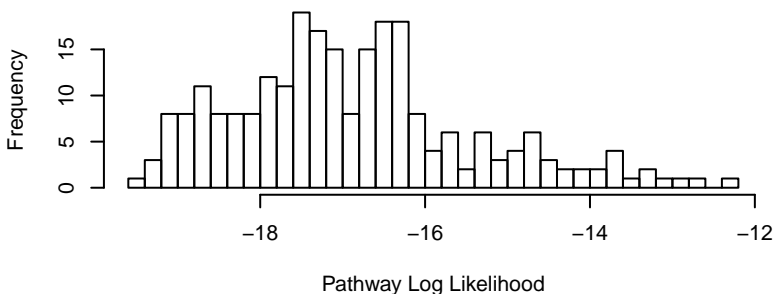
[2087/3167] PWY-7563
 bassianin and desmethylbassianin biosynthesis
 (2 Reactions)



[2088/3167] PWY-7564
 bacmethrin and bacmethrin pyrophosphate biosynthesis
 (4 Reactions)

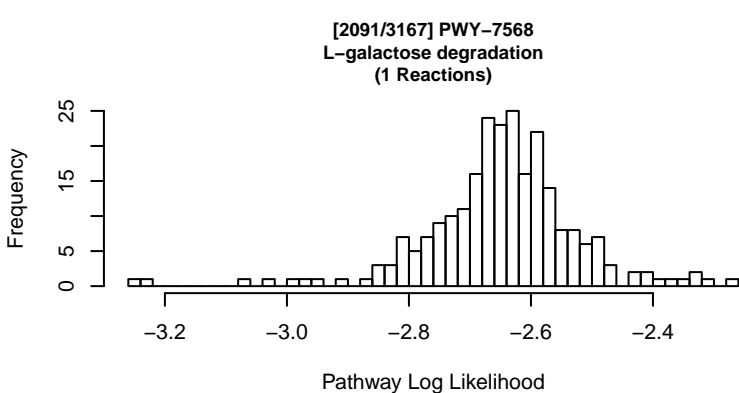
Missing 1 Reaction(s) from Pathway.

[2089/3167] PWY-7565
 aspyridone A biosynthesis
 (4 Reactions)



[2090/3167] PWY-7566
 L-gulonate degradation
 (1 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[2092/3167] PWY-7569
arginomycin biosynthesis
(7 Reactions)

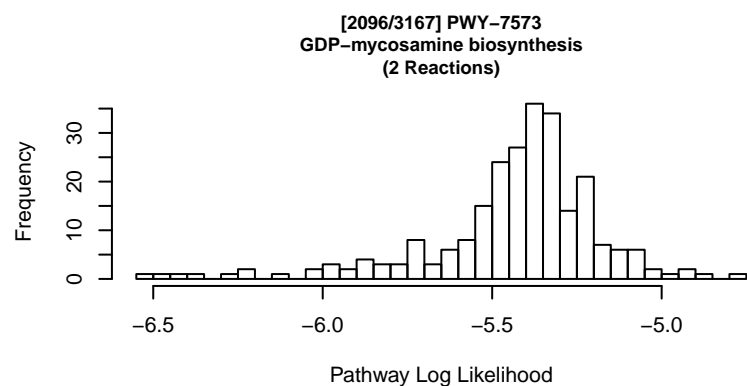
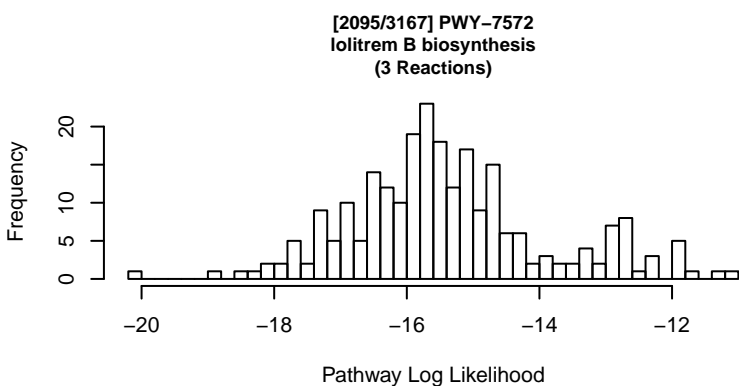
Missing 1 Reaction(s) from Pathway.

[2093/3167] PWY-7570
blasticidin S biosynthesis
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[2094/3167] PWY-7571
ferrichrome A biosynthesis
(5 Reactions)

Zeros/-Inf for reaction(s) in Pathway

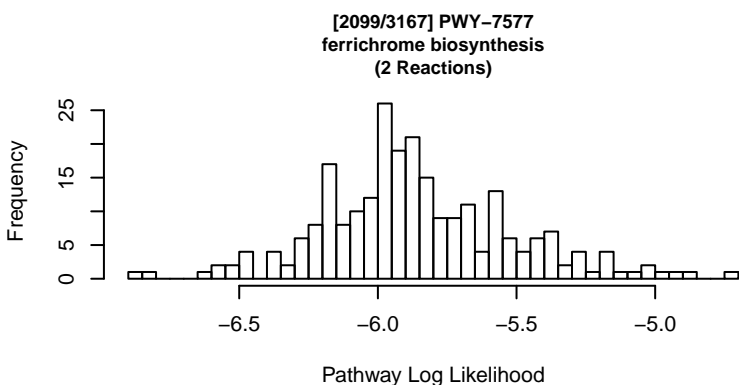


[2097/3167] PWY-7574
propanoyl-CoA degradation II
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2098/3167] PWY-7576
nitrogen fixation II (flavodoxin)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[2100/3167] PWY-7578
phycoviolobin biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

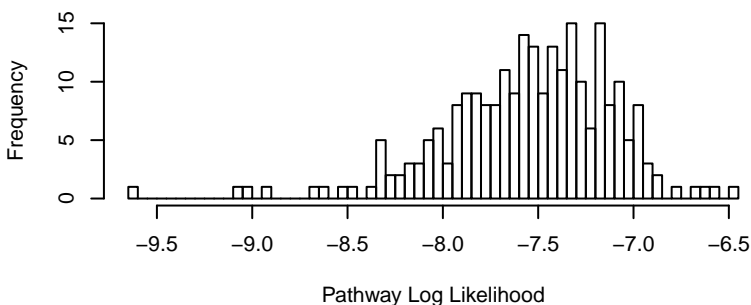
[2101/3167] PWY-7579
phycourobilin biosynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

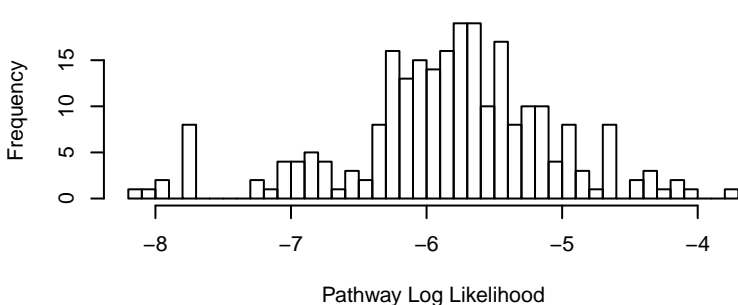
[2102/3167] PWY-7580
phycoerythrobilin biosynthesis II
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

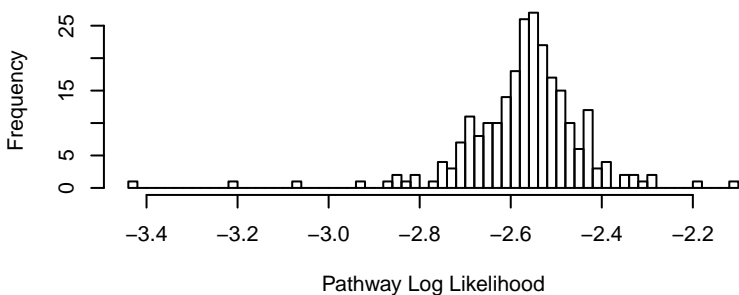
[2103/3167] PWY-7581
<i>N</i>-acetylneuraminate and <i>N</i>-acetylmannosamine degradation II
(2 Reactions)



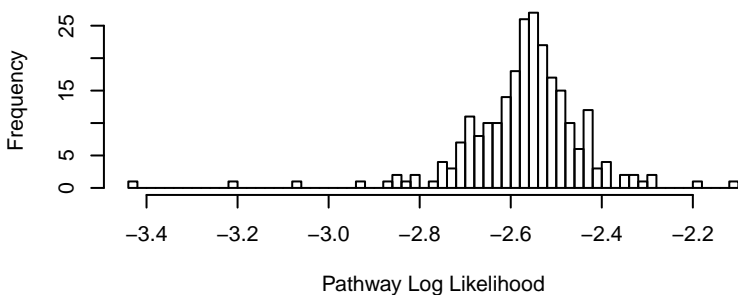
[2104/3167] PWY-7582
mercaptosuccinate degradation
(1 Reactions)



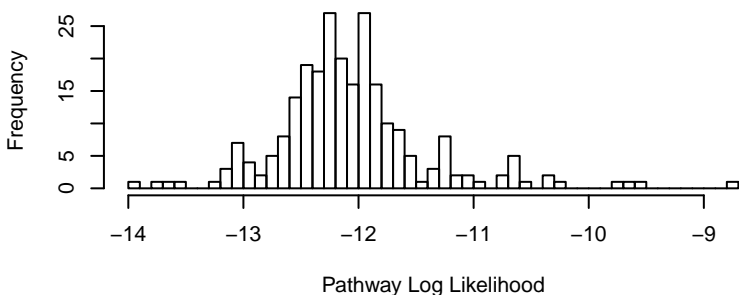
[2105/3167] PWY-7583
arachidonate biosynthesis II (bacteria)
(1 Reactions)



[2106/3167] PWY-7585
docosahexaenoate biosynthesis II (bacteria)
(1 Reactions)



[2107/3167] PWY-7586
β-1,4-D-mannosyl-<i>N</i>-acetyl-D-glucosamine degradation
(3 Reactions)



[2108/3167] PWY-7587
oleate biosynthesis III (cyanobacteria)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2109/3167] PWY-7588
ursodeoxycholate biosynthesis (bacteria)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2110/3167] PWY-7589
palmitoleate biosynthesis III (cyanobacteria)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2111/3167] PWY-7590
(7Z,10Z,13Z)-hexadecatrienoate biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2112/3167] PWY-7591
okenone biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2113/3167] PWY-7592
arachidonate biosynthesis III (6-desaturase, mammals)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2114/3167] PWY-7593
linoleate biosynthesis III (cyanobacteria)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2115/3167] PWY-7594
γ-linolenate biosynthesis III (cyanobacteria)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2116/3167] PWY-7595
stearidonate biosynthesis (cyanobacteria)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2117/3167] PWY-7598
α-linolenate biosynthesis II (cyanobacteria)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

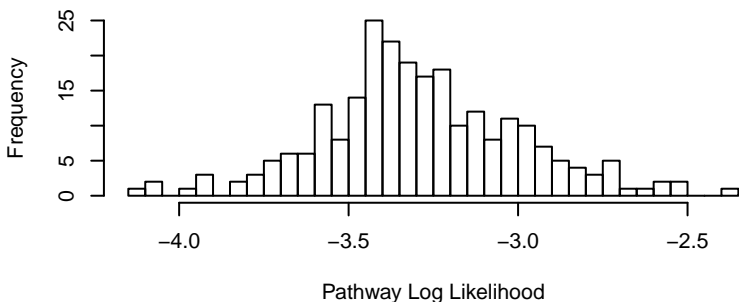
[2118/3167] PWY-7599
anditomin biosynthesis
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[2119/3167] PWY-7600
peramine biosynthesis
(1 Reactions)

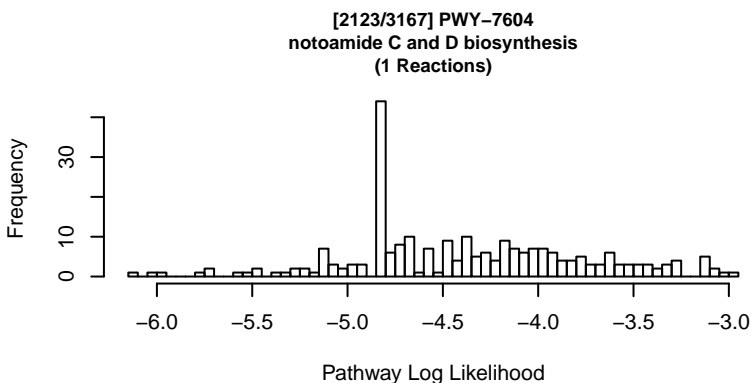
[2120/3167] PWY-7601
arachidonate biosynthesis IV (8-detaturase, lower eukaryotes)
(7 Reactions)

Missing 3 Reaction(s) from Pathway.



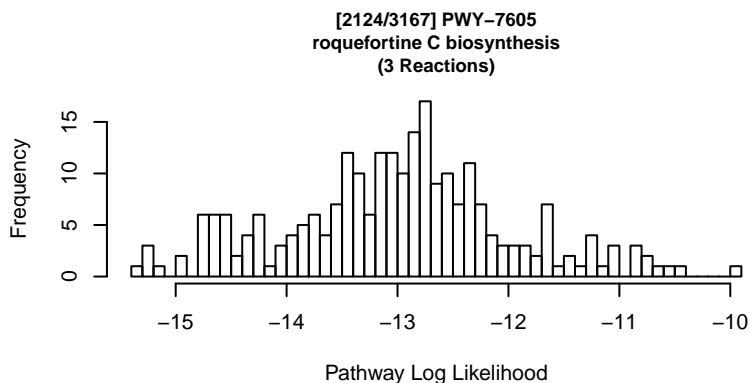
[2121/3167] PWY-7602
icosapentaenoate biosynthesis V (8-desaturase, lower eukaryotes)
(7 Reactions)

Missing 3 Reaction(s) from Pathway.



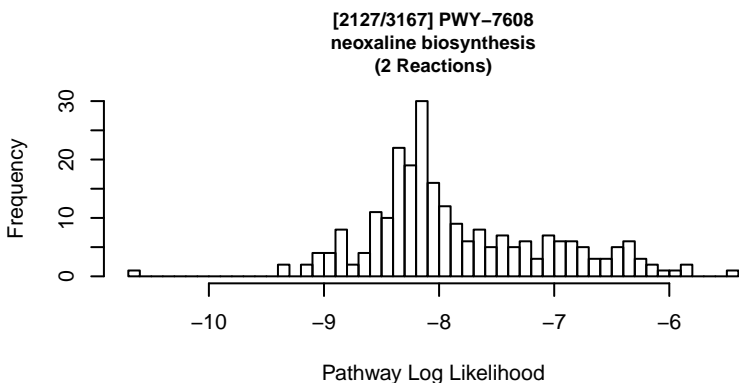
[2122/3167] PWY-7603
stephacidin A biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

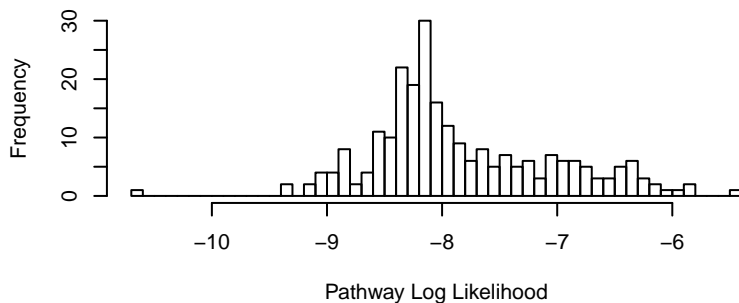


[2125/3167] PWY-7606
docosahexaenoate biosynthesis III (6-desaturase, mammals)
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

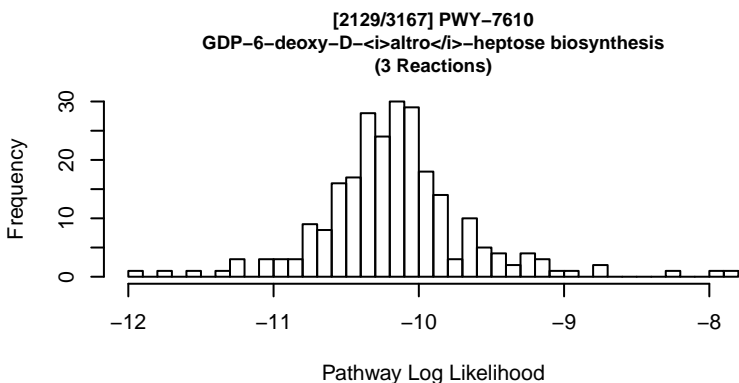


[2126/3167] PWY-7607
meleagrin biosynthesis
(2 Reactions)

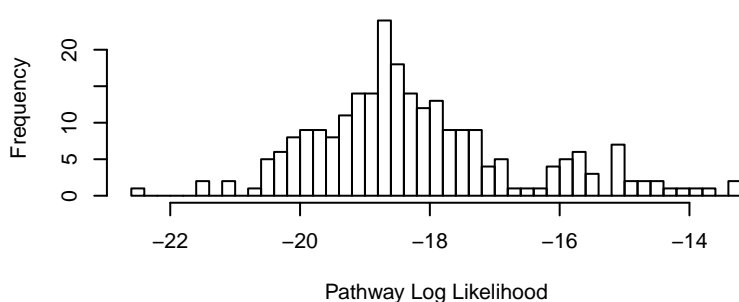


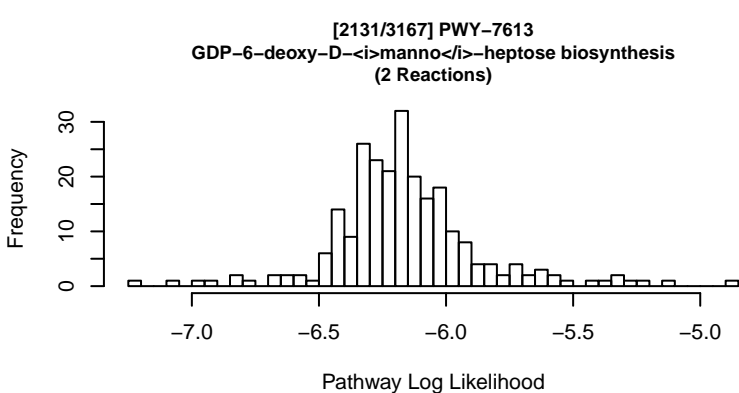
[2128/3167] PWY-761
rhizobactin 1021 biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.



[2130/3167] PWY-7612
chaetoglobosin A biosynthesis
(4 Reactions)





[2132/3167] PWY-7614
methiin metabolism
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2133/3167] PWY-7615
pterocarpan phytoalexins modification (maackiain, medicarpin, pisatin, phaseollin)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2134/3167] PWY-7616
methanol oxidation to carbon dioxide
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2135/3167] PWY-7618
ricinoleate biosynthesis
(3 Reactions)

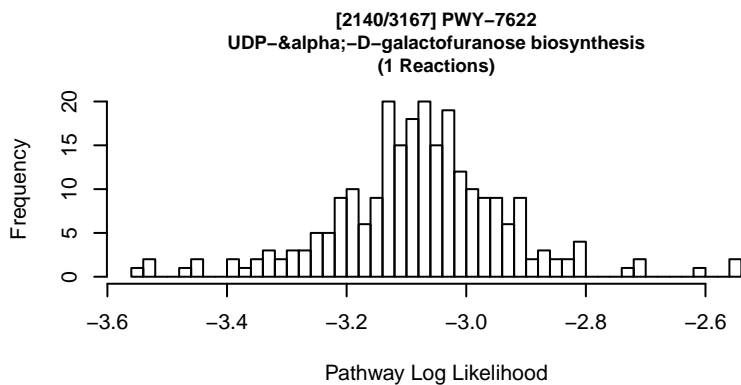
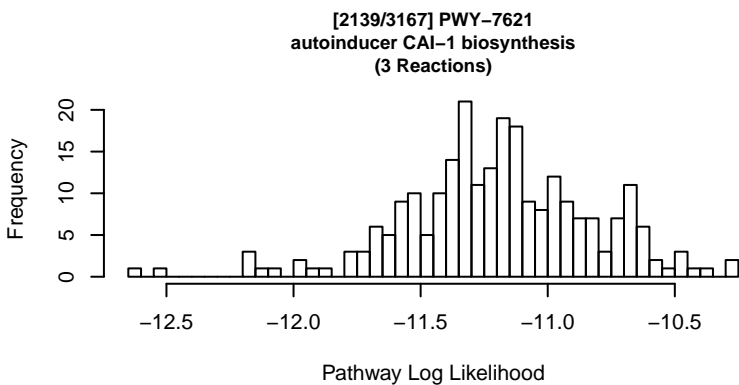
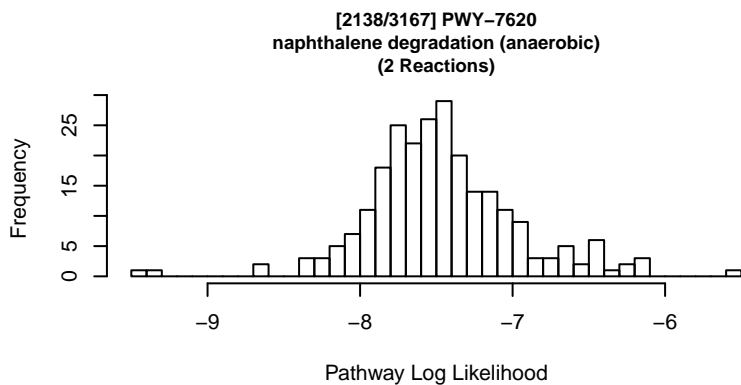
Missing 2 Reaction(s) from Pathway.

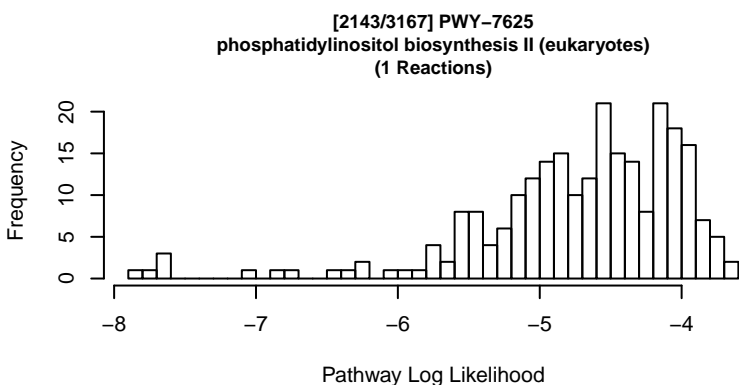
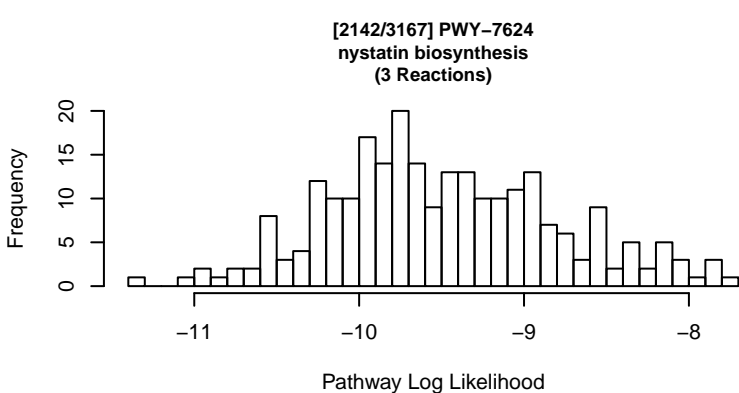
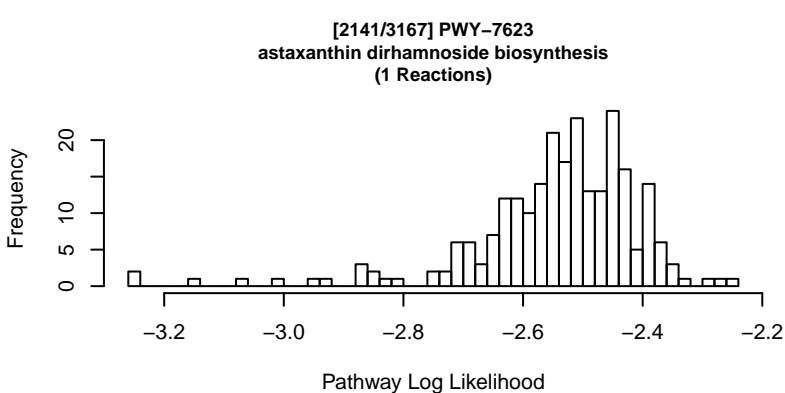
[2136/3167] PWY-7619
juniperonate biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2137/3167] PWY-762
phospholipid desaturation
(5 Reactions)

Missing ALL Reaction(s) from Pathway.





[2144/3167] PWY-7626
bacilysin biosynthesis
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[2145/3167] PWY-7627
2,4,6-trinitrophenol and 2,4-dinitrophenol degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2146/3167] PWY-7628
2,4-dinitroanisole degradation
(1 Reactions)

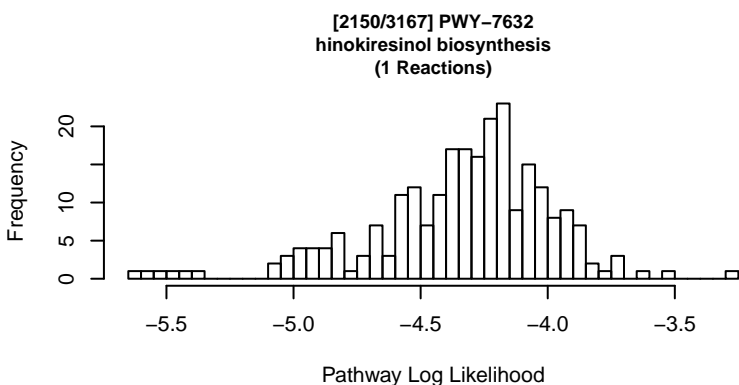
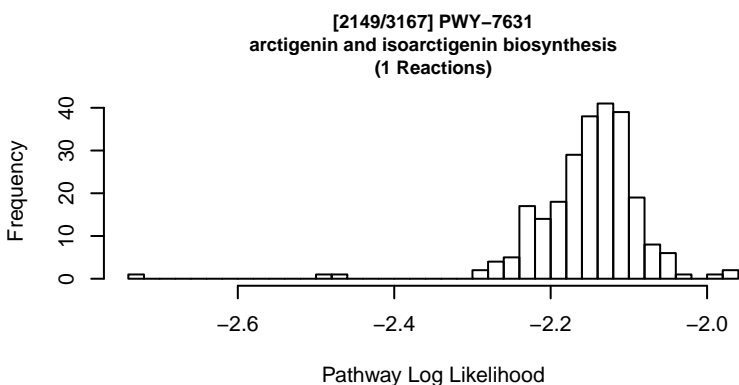
Missing ALL Reaction(s) from Pathway.

[2147/3167] PWY-7629
yatein biosynthesis II
(4 Reactions)

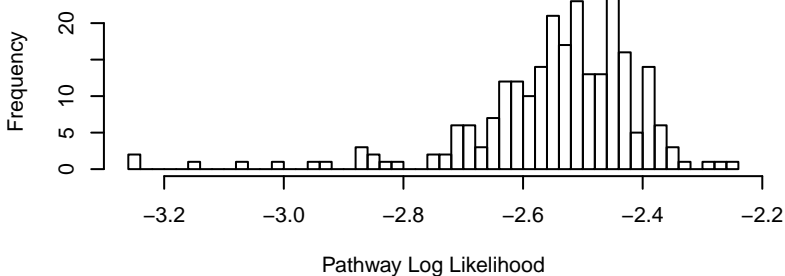
Missing 1 Reaction(s) from Pathway.

[2148/3167] PWY-7630
hinokinin biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[2151/3167] PWY-7633
calycosin 7-O-glucoside biosynthesis
(1 Reactions)



[2152/3167] PWY-7634
vernolate biosynthesis II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

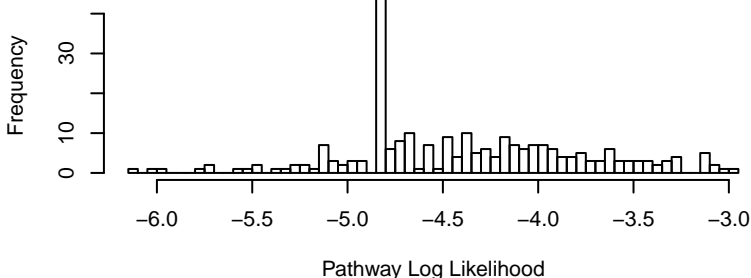
[2153/3167] PWY-7635
kievitone detoxification
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

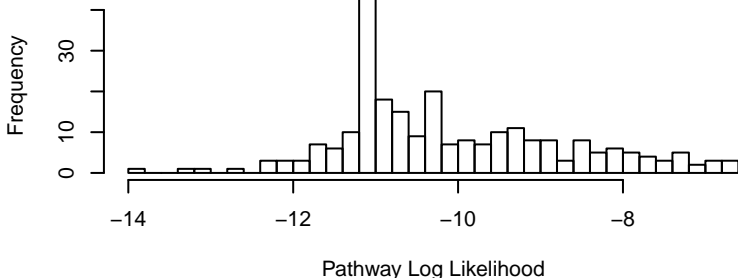
[2154/3167] PWY-7636
astaxanthin biosynthesis (flowering plants)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

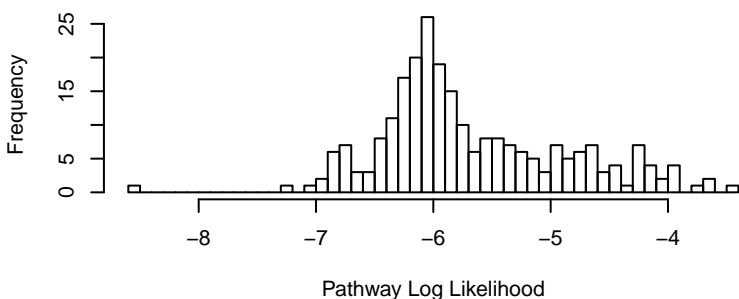
[2155/3167] PWY-7637
2,2'-dihydroxyketocarotenoids biosynthesis
(1 Reactions)



[2156/3167] PWY-7638
echinenone and zeaxanthin biosynthesis (<i>Synechocystis</i>)
(2 Reactions)



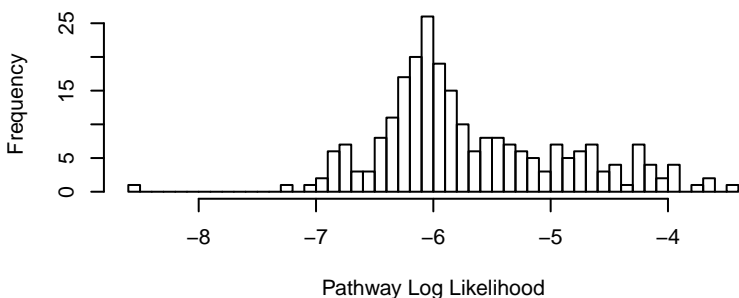
[2157/3167] PWY-7640
abscisic acid degradation to neophaseic acid
(1 Reactions)



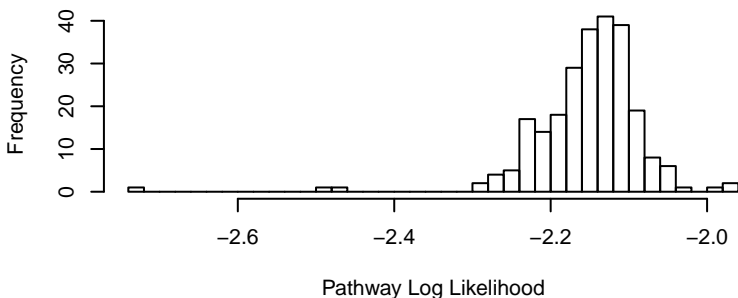
[2158/3167] PWY-7641
5-hexynoate biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2159/3167] PWY-7642
abscisic acid degradation to 7'-hydroxyabscisate
(1 Reactions)



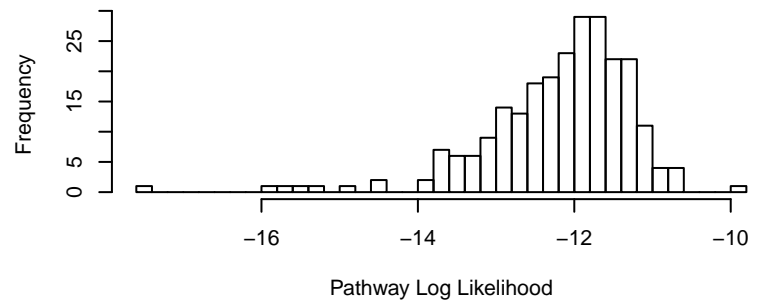
[2160/3167] PWY-7643
coniferyl alcohol 9-methyl ester biosynthesis
(1 Reactions)



[2161/3167] PWY-7644
heparin degradation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

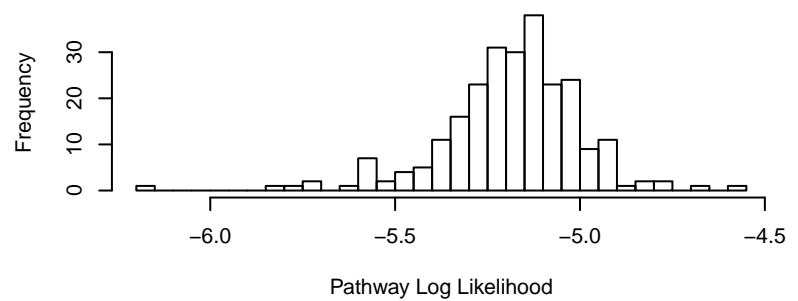
[2162/3167] PWY-7645
hyaluronan degradation
(3 Reactions)



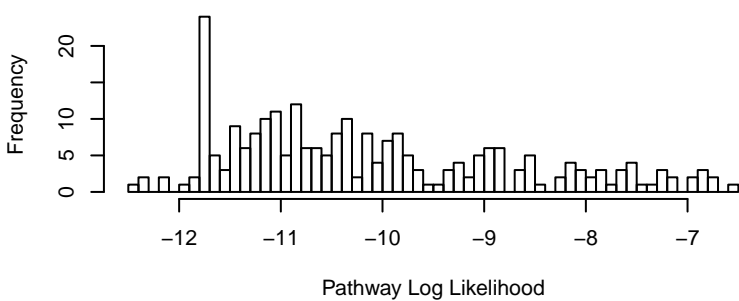
[2163/3167] PWY-7646
dermatan sulfate degradation I (bacterial)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2164/3167] PWY-7647
ulvan degradation
(2 Reactions)



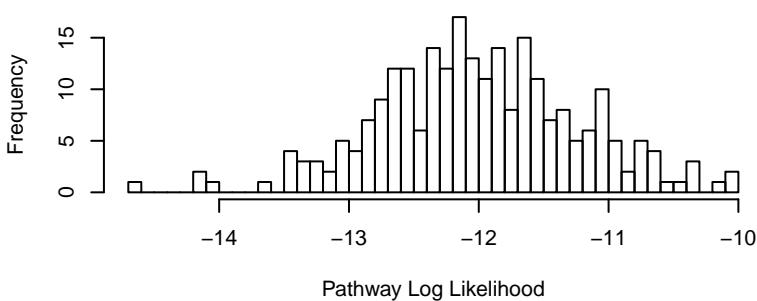
[2165/3167] PWY-7648
3-hydroxy-4-methyl-proline biosynthesis
(2 Reactions)



[2166/3167] PWY-7649
3-hydroxy-L-homotyrosine biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

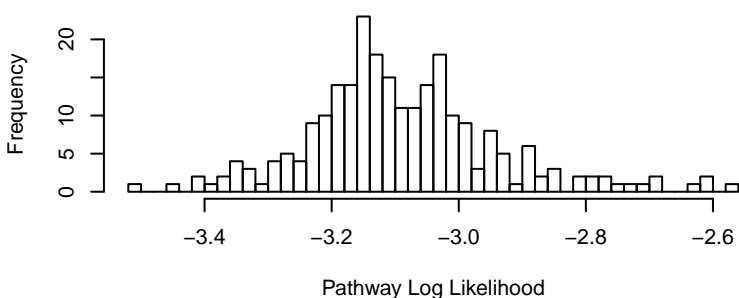
[2167/3167] PWY-7650
echinocandin B biosynthesis
(3 Reactions)



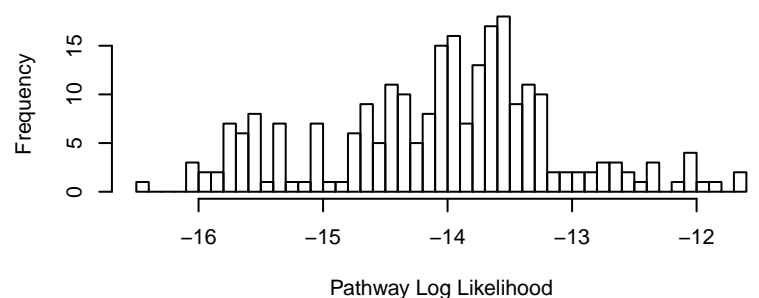
[2168/3167] PWY-7651
heparan sulfate degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2169/3167] PWY-7652
echinocandin B degradation
(1 Reactions)



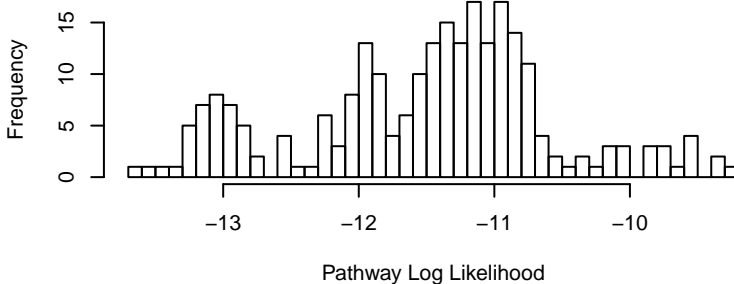
[2170/3167] PWY-7653
griseofulvin biosynthesis
(4 Reactions)



[2171/3167] PWY-7654
 (8*E*,10*E*)-dodeca-8,10-dienol biosynthesis
 (8 Reactions)

Missing 3 Reaction(s) from Pathway.

[2172/3167] PWY-7655
 dechlorogriseofulvin biosynthesis
 (3 Reactions)



[2173/3167] PWY-7656
Spodoptera littoralis pheromone biosynthesis
 (9 Reactions)

Missing 5 Reaction(s) from Pathway.

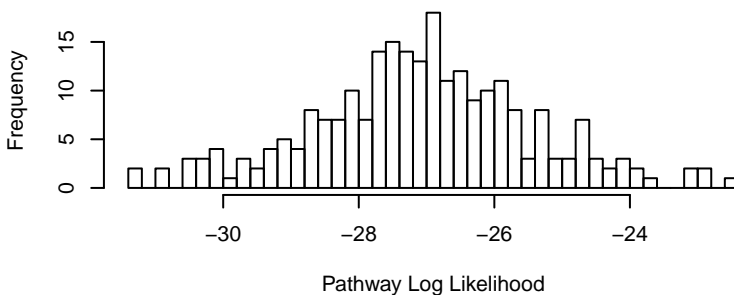
[2174/3167] PWY-7657
 dTDP-β-L-digitoxose biosynthesis
 (5 Reactions)

Missing 1 Reaction(s) from Pathway.

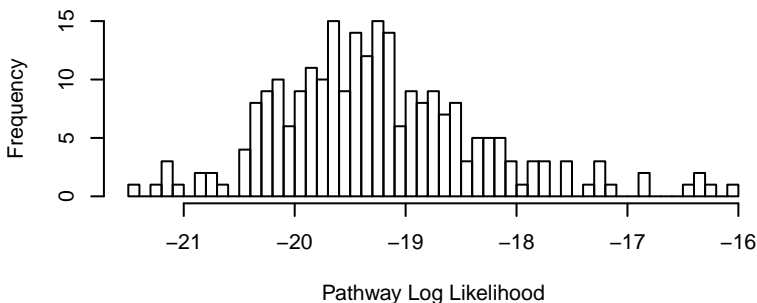
[2175/3167] PWY-7658
 protein N-glycosylation (*Methanococcus voltae*)
 (5 Reactions)

Missing 3 Reaction(s) from Pathway.

[2176/3167] PWY-7659
 viridicatumtoxin biosynthesis
 (7 Reactions)



[2177/3167] PWY-7660
 tryptoquialanine biosynthesis
 (6 Reactions)



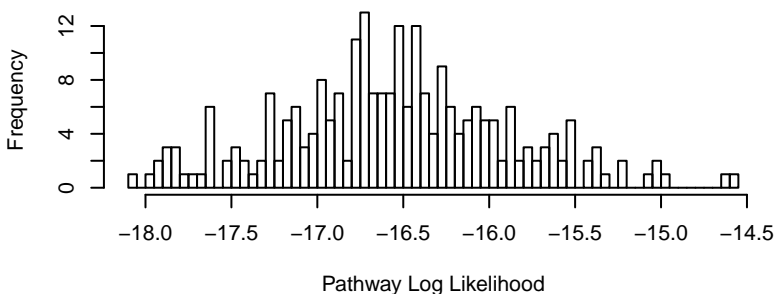
[2178/3167] PWY-7661
 protein N-glycosylation (*Haloferax volcanii*)
 (6 Reactions)

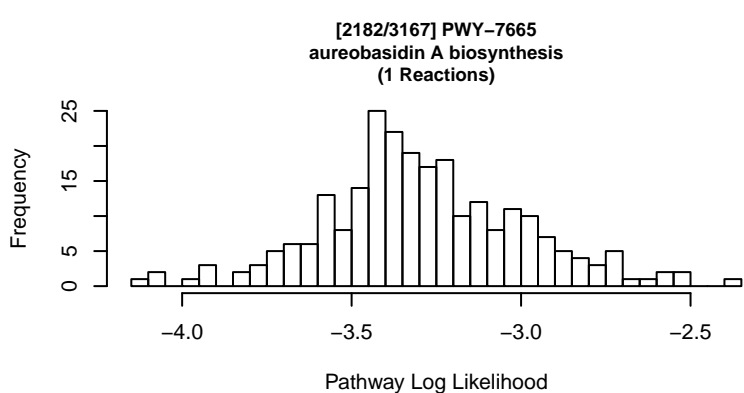
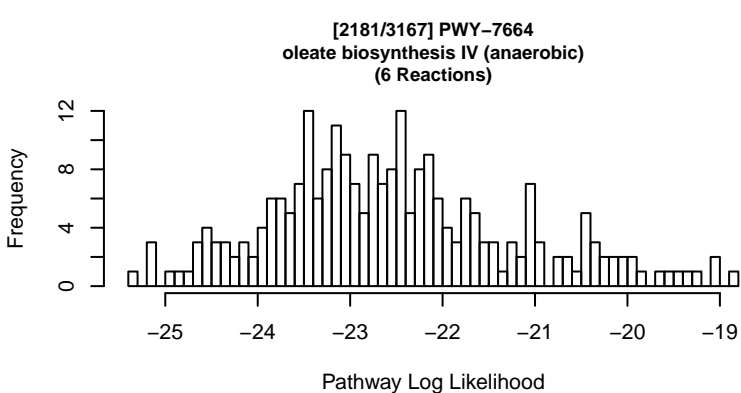
Missing 1 Reaction(s) from Pathway.

[2179/3167] PWY-7662
 glycogen degradation III (via anhydrofructose)
 (3 Reactions)

Missing ALL Reaction(s) from Pathway.

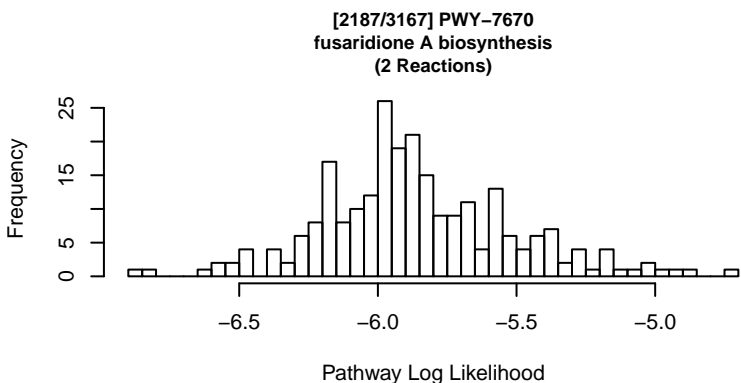
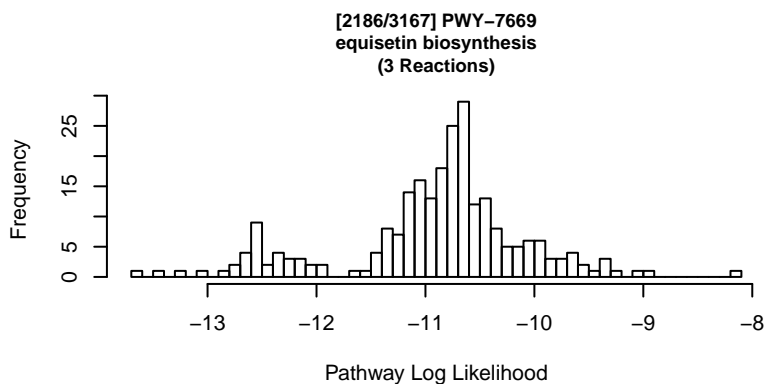
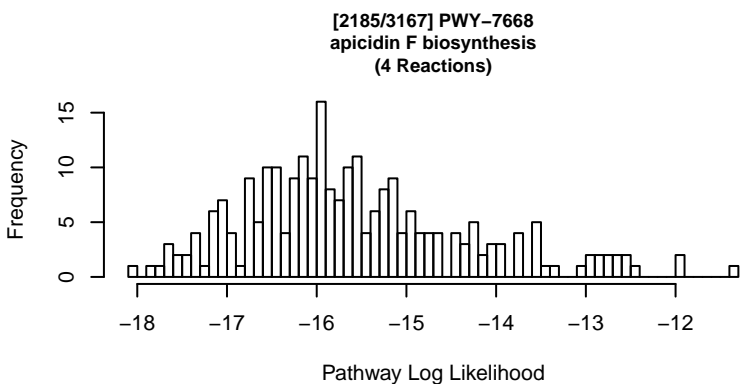
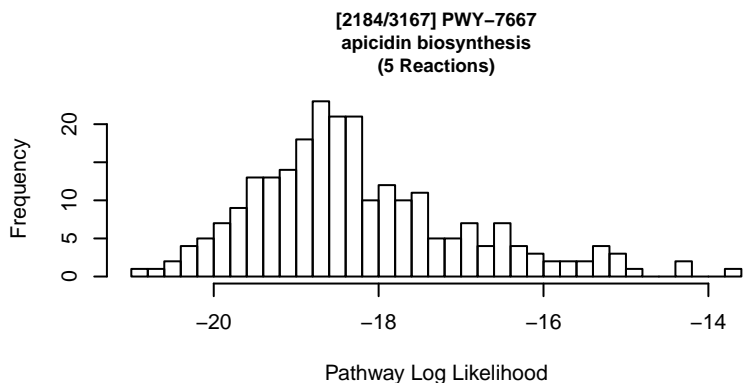
[2180/3167] PWY-7663
 gondoate biosynthesis (anaerobic)
 (5 Reactions)





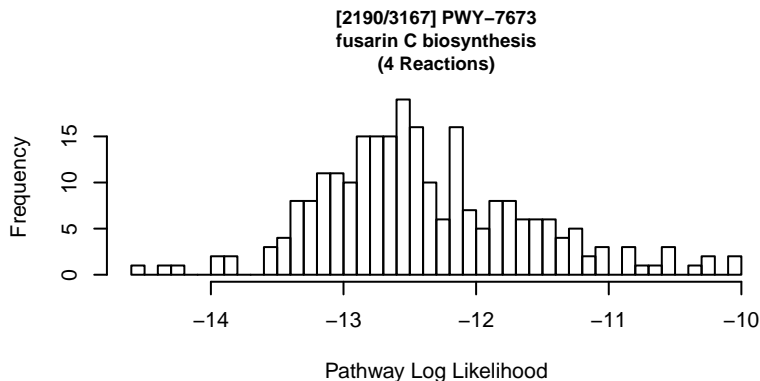
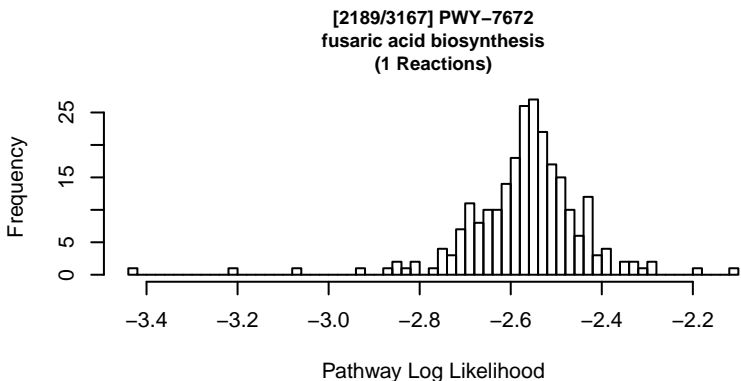
[2183/3167] PWY-7666
galactolipid biosynthesis II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



[2188/3167] PWY-7671
saframycin A biosynthesis
(6 Reactions)

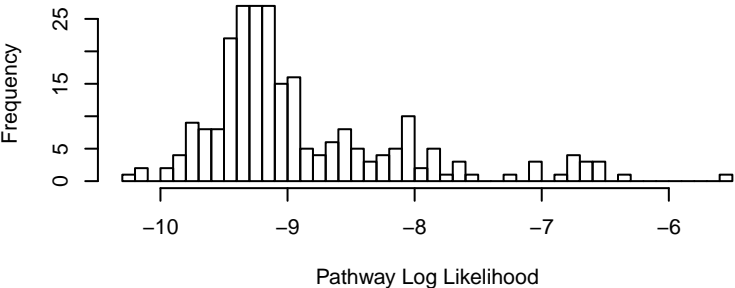
Missing 3 Reaction(s) from Pathway.



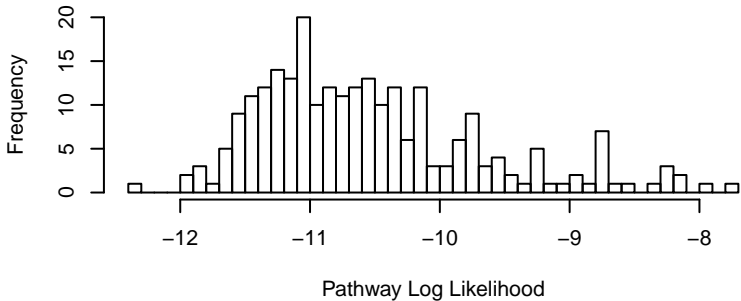
[2191/3167] PWY-7674
CMP-8-amino-3,8-dideoxy-D-*l*-manno-octulosonate biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

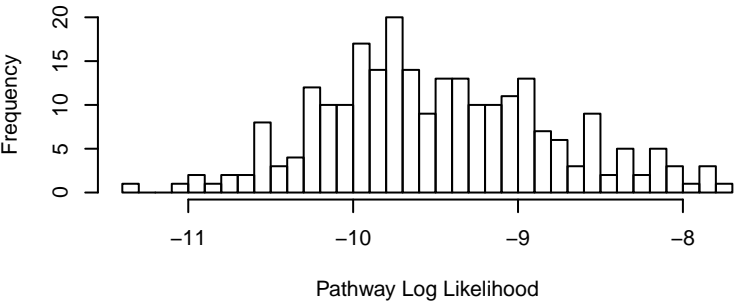
[2192/3167] PWY-7675
Kdo transfer to lipid IV_A (*Haemophilus*)
(2 Reactions)



[2193/3167] PWY-7676
Kdo8N transfer to lipid IV_A
(2 Reactions)



[2194/3167] PWY-7677
rosamicin biosynthesis
(3 Reactions)



[2195/3167] PWY-7678
anthocyanidin sambubioside biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2196/3167] PWY-7679
anthocyanidin acylglucoside and acylsambubioside biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

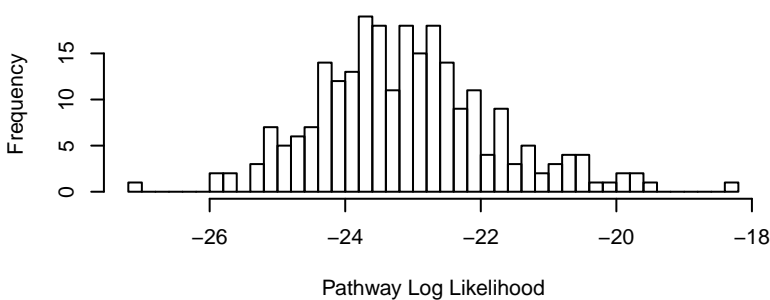
[2197/3167] PWY-7680
carnosate bioynthesis
(5 Reactions)

Missing ALL Reaction(s) from Pathway.

[2198/3167] PWY-7681
1-chloro-2-nitrobenzene degradation
(1 Reactions)

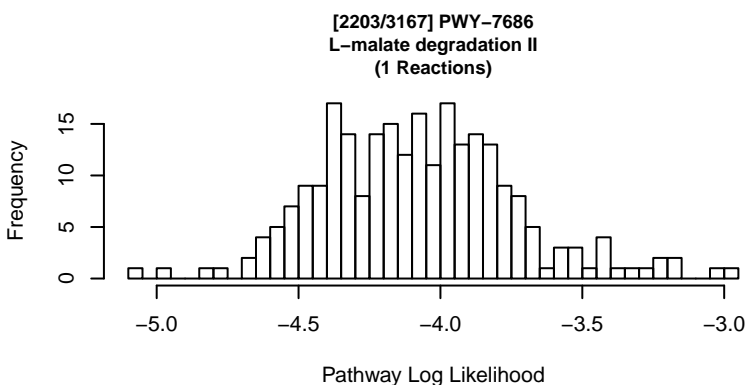
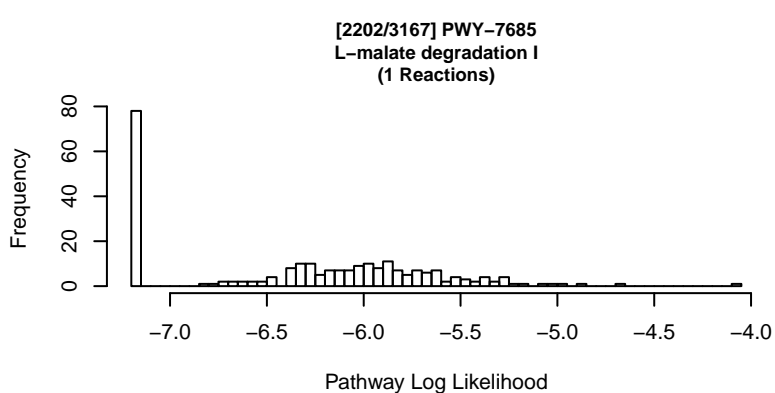
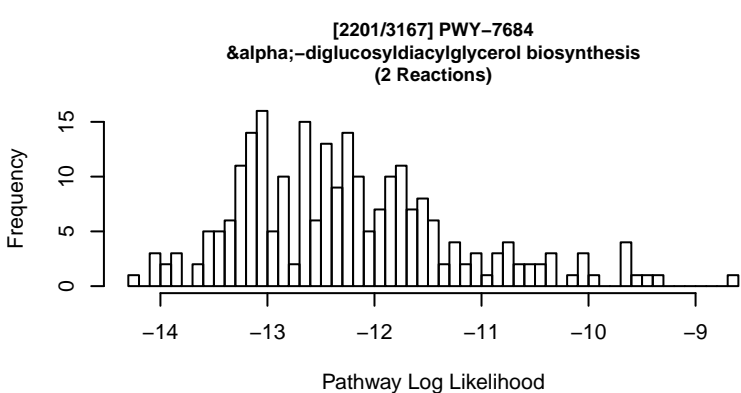
Missing ALL Reaction(s) from Pathway.

[2199/3167] PWY-7682
arabidopyrone biosynthesis
(5 Reactions)



[2200/3167] PWY-7683
nitrite reduction (hemoglobin)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

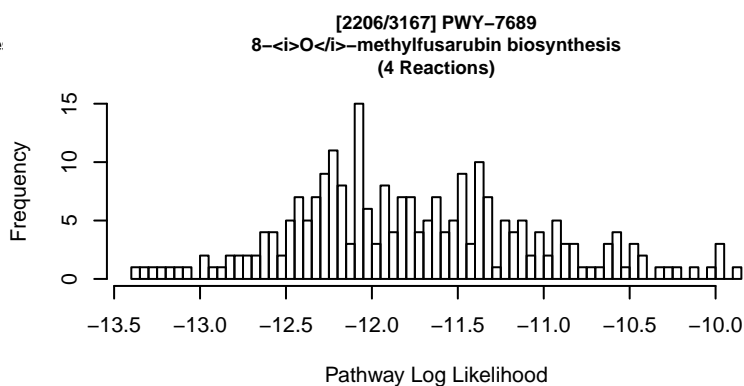


[2204/3167] PWY-7687
stipitate biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

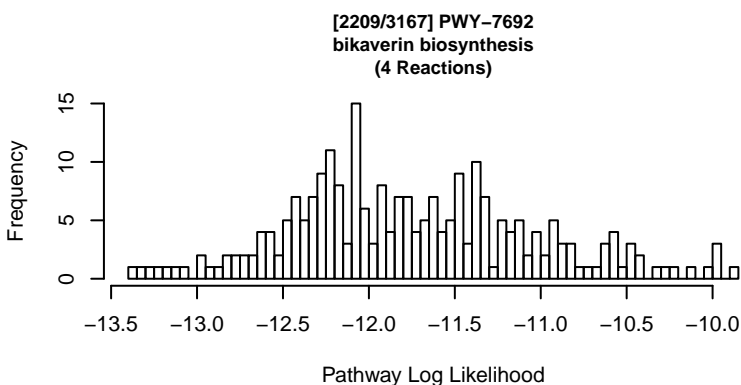
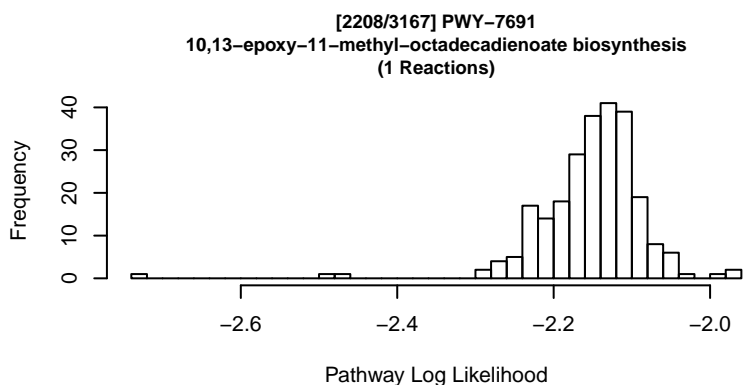
[2205/3167] PWY-7688
dTDP-α-D-ravidosamine and dTDP-4-acetyl-α-D-ravidosamine biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.



[2207/3167] PWY-7690
holomycin biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.



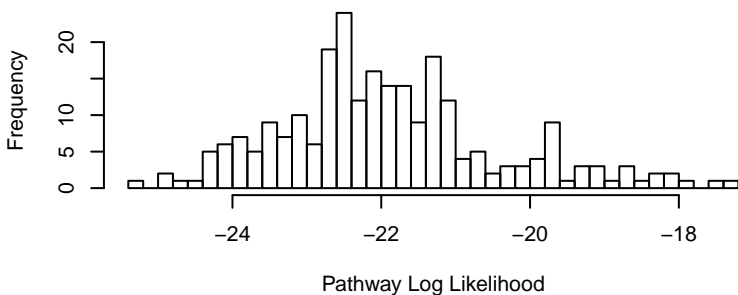
[2210/3167] PWY-7693
guadinomine B biosynthesis
(8 Reactions)

Missing 3 Reaction(s) from Pathway.

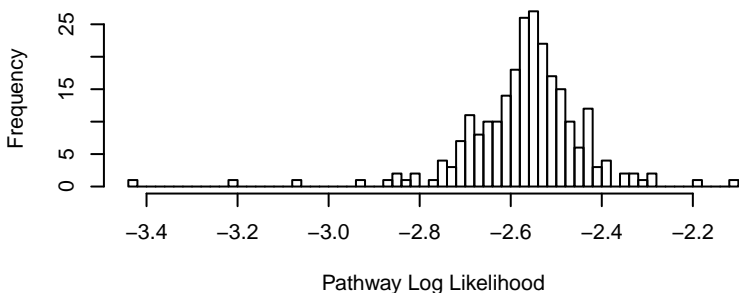
[2211/3167] PWY-7694
zwittermicin A biosynthesis
(9 Reactions)

Missing 4 Reaction(s) from Pathway.

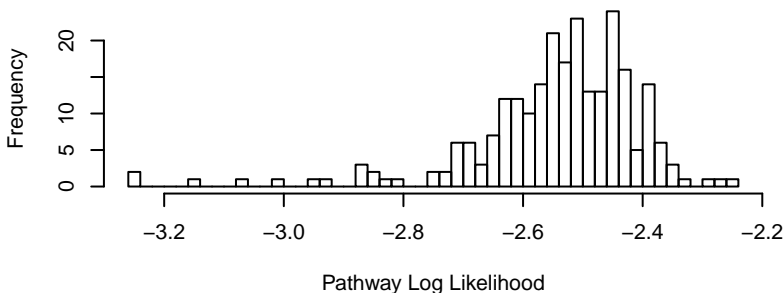
[2212/3167] PWY-7695
aurofusarin biosynthesis
(6 Reactions)



[2213/3167] PWY-7696
citreisocoumarin and bikisocoumarin biosynthesis
(1 Reactions)



[2214/3167] PWY-7697
geranyl β-primeveroside biosynthesis
(1 Reactions)



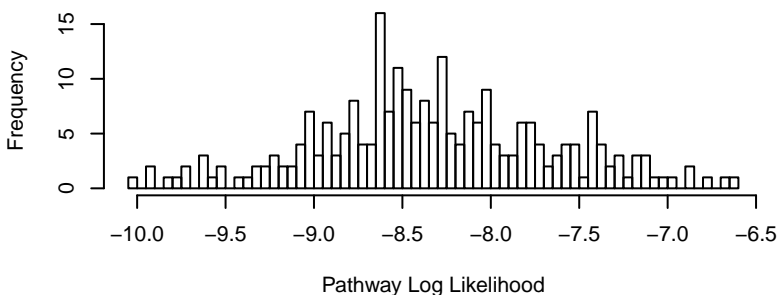
[2215/3167] PWY-7698
2,5-xenol and 3,5-xenol degradation
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

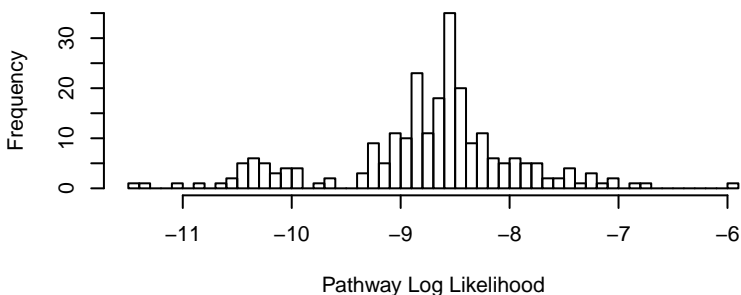
[2216/3167] PWY-7700
4-methylphenol degradation to protocatechuate
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2217/3167] PWY-7701
4-hydroxy-4-methyl-L-glutamate biosynthesis
(2 Reactions)



[2218/3167] PWY-7702
sch210971 and sch210972 biosynthesis
(2 Reactions)



[2219/3167] PWY-7703
2,4-xenol degradation to protocatechuate
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2220/3167] PWY-7704
viridicatin biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

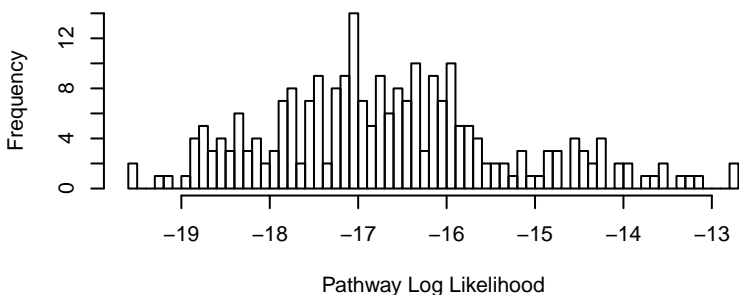
[2221/3167] PWY-7705
4'-methoxyviridicatin biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2222/3167] PWY-7706
dapdiamides biosynthesis
(9 Reactions)

Missing 4 Reaction(s) from Pathway.

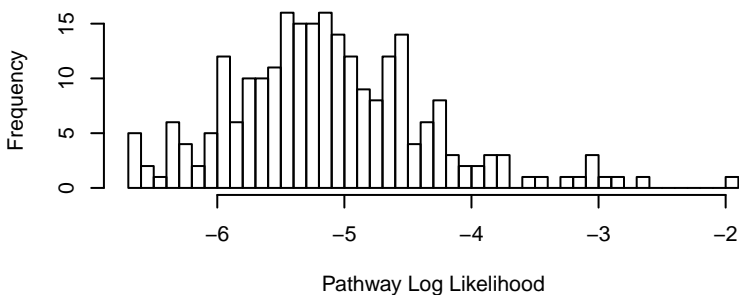
[2223/3167] PWY-7708
lyngbyatoxin biosynthesis
(4 Reactions)



[2224/3167] PWY-7709
(3*i*R<i>/i>)-linalool biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

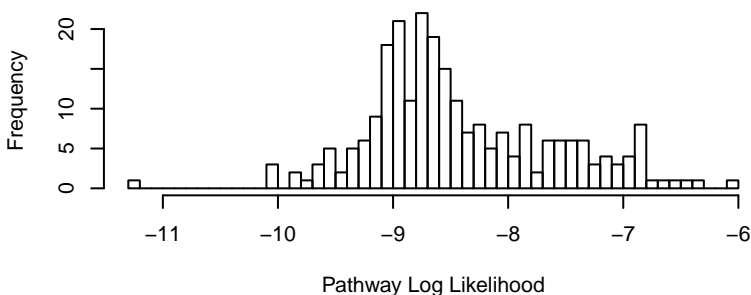
[2225/3167] PWY-7710
FeMo cofactor biosynthesis
(1 Reactions)



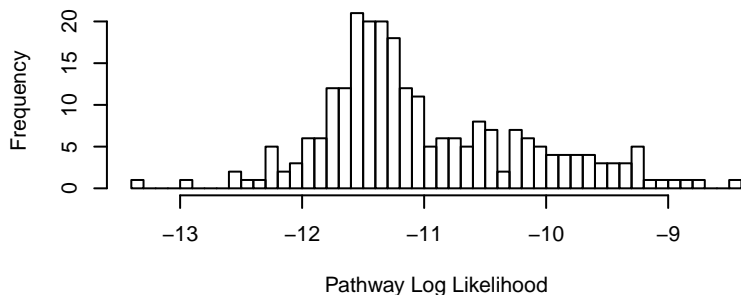
[2226/3167] PWY-7711
calonectrin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

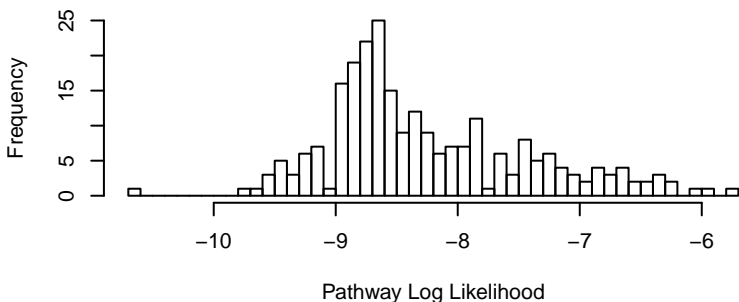
[2227/3167] PWY-7712
deoxynivalenol biosynthesis
(2 Reactions)



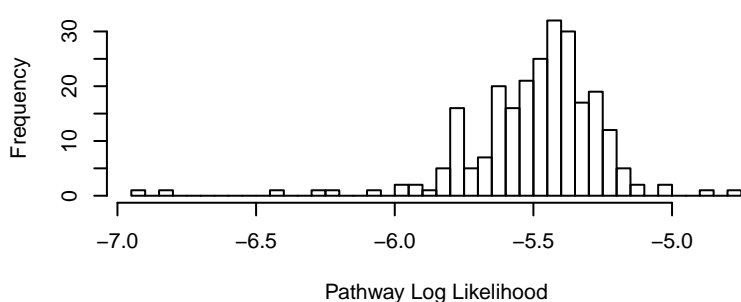
[2228/3167] PWY-7713
nivalenol biosynthesis
(3 Reactions)



[2229/3167] PWY-7714
harzianum A and trichodermin biosynthesis
(2 Reactions)



[2230/3167] PWY-7716
penicillin G and penicillin V biosynthesis
(2 Reactions)



[2231/3167] PWY-7717
3-hydroxy-4-methyl-anthranilate biosynthesis I
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[2232/3167] PWY-7718
actinomycin D biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2233/3167] PWY-7719
CMP-diacetamido-8-epilegionaminic acid biosynthesis
(7 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2234/3167] PWY-7720
ophiobolin F biosynthesis
(3 Reactions)

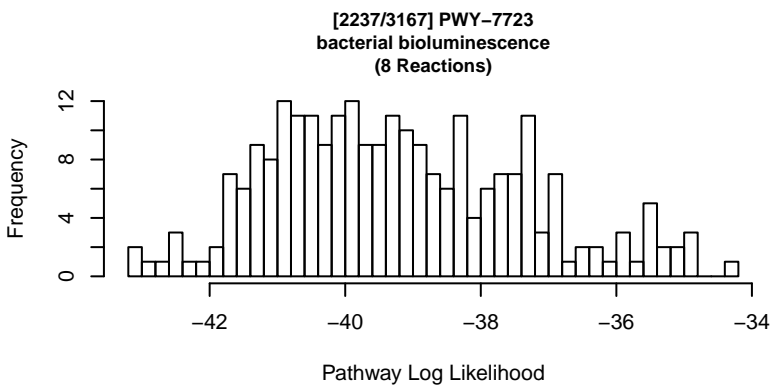
Missing 2 Reaction(s) from Pathway.

[2235/3167] PWY-7721
methyl phomopsenoate biosynthesis
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2236/3167] PWY-7722
sulfoquinovose degradation II
(5 Reactions)

Missing 3 Reaction(s) from Pathway.



[2238/3167] PWY-7724
icosapentaenoate biosynthesis III (8-desaturase, mammals)
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

[2239/3167] PWY-7725
arachidonate biosynthesis V (8-desaturase, mammals)
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[2240/3167] PWY-7726
(4Z,7Z,10Z,13Z,16Z)-docosapentaenoate biosynthesis (6-desaturase)
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

[2241/3167] PWY-7727
docosaehaenoate biosynthesis IV (4-desaturase, mammals)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

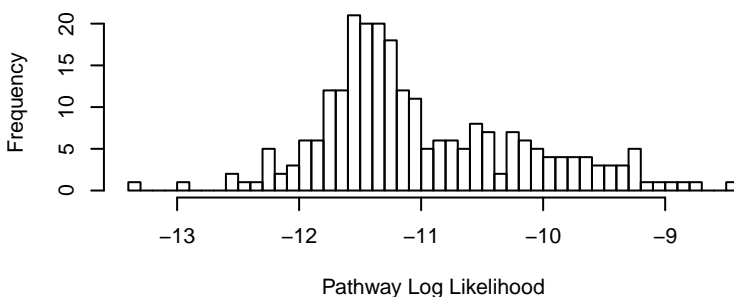
[2242/3167] PWY-7728
(4Z,7Z,10Z,13Z,16Z)-docosa-4,7,10,13,16-pentaenoate biosynthesis II (4-desaturase)
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

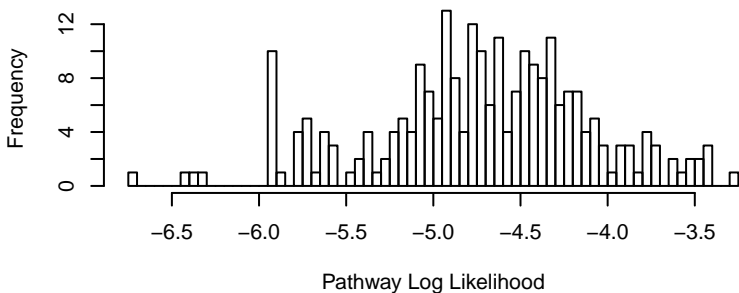
[2243/3167] PWY-7729
5,6-dimethylbenzimidazole biosynthesis II (anaerobic)
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2244/3167] PWY-7730
T-2 toxin biosynthesis
(3 Reactions)



[2245/3167] PWY-7731
superpathway of photosynthetic hydrogen production
(1 Reactions)



[2246/3167] PWY-7733
3-hydroxyquinaldate biosynthesis
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[2247/3167] PWY-7734
quinoxaline-2-carboxylate biosynthesis
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

[2248/3167] PWY-7735
echinomycin and triostin A biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2249/3167] PWY-7736
stellatic acid biosynthesis
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[2250/3167] PWY-7737
thiocoraline biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2251/3167] PWY-7738
polyacyltrehalose biosynthesis
(7 Reactions)

Missing ALL Reaction(s) from Pathway.

[2252/3167] PWY-7739
aucuparin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2253/3167] PWY-7740
β-D-mannosyl phosphomycoketide biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[2254/3167] PWY-7741
phthiocerol biosynthesis
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

[2255/3167] PWY-7742
phenolphthiocerol biosynthesis
(8 Reactions)

Missing 7 Reaction(s) from Pathway.

[2256/3167] PWY-7743
dimycocerosyl triglycosyl phenolphthiocerol biosynthesis
(9 Reactions)

Missing 8 Reaction(s) from Pathway.

[2257/3167] PWY-7744
dimycocerosyl phthiocerol biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

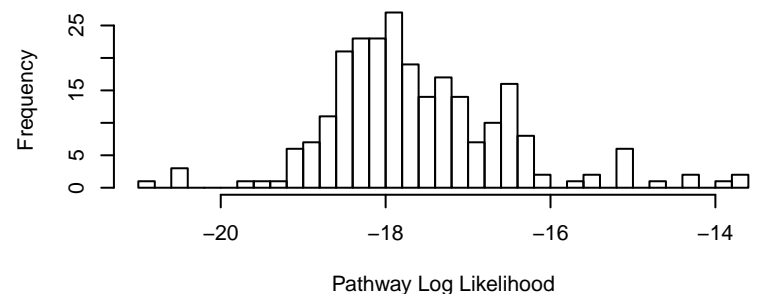
[2258/3167] PWY-7745
p-HBAD biosynthesis
(9 Reactions)

Missing 8 Reaction(s) from Pathway.

[2259/3167] PWY-7746
mycobacterial sulfolipid biosynthesis
(7 Reactions)

Missing 5 Reaction(s) from Pathway.

[2260/3167] PWY-7747
diphenyl ethers degradation
(3 Reactions)



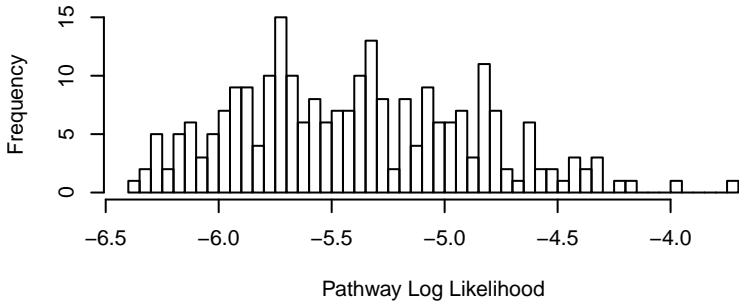
[2261/3167] PWY-7748
yatein biosynthesis I
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[2262/3167] PWY-7749
(-)-4'-demethyl-epipodophyllotoxin biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2263/3167] PWY-7750
carbon monoxide oxidation to CO₂
(1 Reactions)



[2264/3167] PWY-7751
shinorine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2265/3167] PWY-7752
gadusol biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2266/3167] PWY-7754
bile acid 7 α -dehydroxylation
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

[2267/3167] PWY-7755
iso-bile acids biosynthesis I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2268/3167] PWY-7756
iso-bile acids biosynthesis II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2269/3167] PWY-7757
bisphenol A degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2270/3167] PWY-7758
bacteriochlorophyll *a* biosynthesis
(7 Reactions)

Missing 6 Reaction(s) from Pathway.

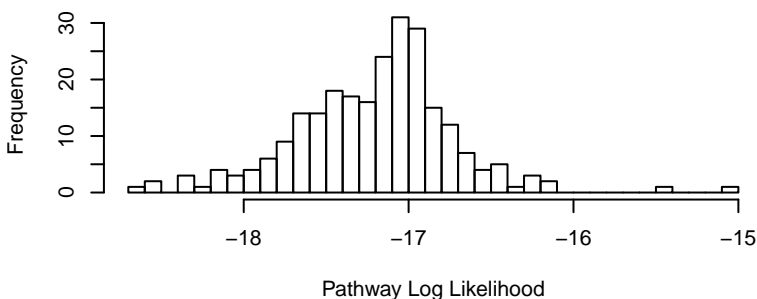
[2271/3167] PWY-7759
bacteriochlorophyll *c* biosynthesis
(8 Reactions)

Missing 7 Reaction(s) from Pathway.

[2272/3167] PWY-7760
bacteriochlorophyll *e* biosynthesis
(8 Reactions)

Missing 7 Reaction(s) from Pathway.

[2273/3167] PWY-7761
NAD salvage pathway II (PNC IV cycle)
(5 Reactions)



[2274/3167] PWY-7762
bacteriochlorophyll *b* biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

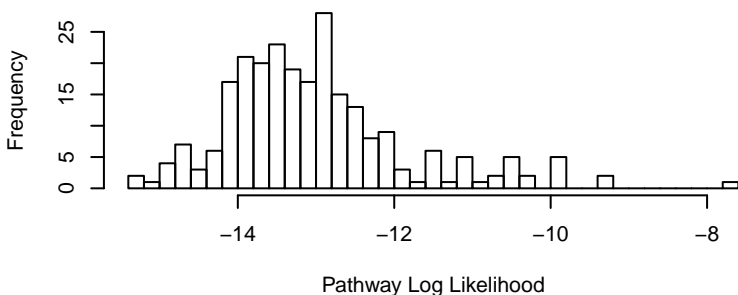
[2275/3167] PWY-7764
chlorophyll *a* biosynthesis III
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2276/3167] PWY-7765
3-hydroxy-4-methyl-anthranilate biosynthesis II
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[2277/3167] PWY-7766
heme *b* biosynthesis IV (Gram-positive bacteria)
(3 Reactions)



[2278/3167] PWY-7767
L-leucine degradation IV (reductive Stickland reaction)
(6 Reactions)

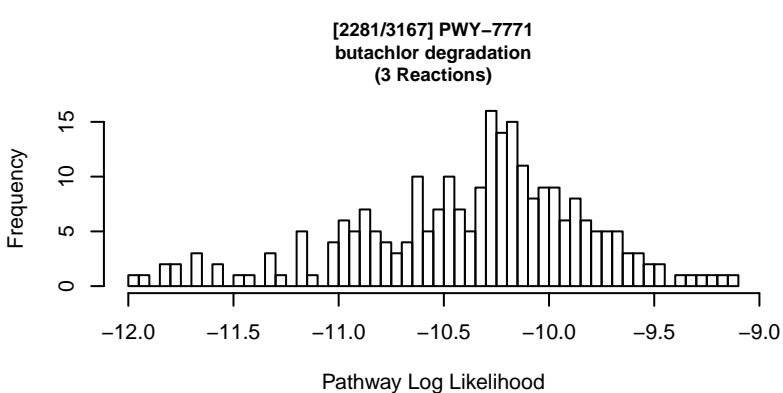
Missing 3 Reaction(s) from Pathway.

[2279/3167] PWY-7769
phosalacine biosynthesis
(20 Reactions)

Missing 5 Reaction(s) from Pathway.

[2280/3167] PWY-7770
indolmycin biosynthesis
(8 Reactions)

Missing 5 Reaction(s) from Pathway.



[2282/3167] PWY-7772
γ-resorcyate degradation II
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2283/3167] PWY-7773
γ-resorcyate degradation I
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2284/3167] PWY-7774
propane degradation I
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[2285/3167] PWY-7775
propane degradation II
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2286/3167] PWY-7776
ethene and chloroethene degradation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2287/3167] PWY-7777
isoprene degradation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2288/3167] PWY-7778
2-methylpropene degradation
(9 Reactions)

Missing 5 Reaction(s) from Pathway.

[2289/3167] PWY-7779
methyl *tert*-butyl ether degradation
(11 Reactions)

Missing 7 Reaction(s) from Pathway.

[2290/3167] PWY-7780
butane degradation
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[2291/3167] PWY-7781
ω-sulfo-II-dihydromenaquinone-9 biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2292/3167] PWY-7782
plasmalogen biosynthesis
(16 Reactions)

Missing 5 Reaction(s) from Pathway.

[2293/3167] PWY-7783
plasmalogen degradation
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2294/3167] PWY-7784
reductive acetyl coenzyme A pathway II (autotrophic methanogens)
(8 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2295/3167] PWY-7786
D-threitol degradation
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2296/3167] PWY-7787
L-threitol degradation
(4 Reactions)

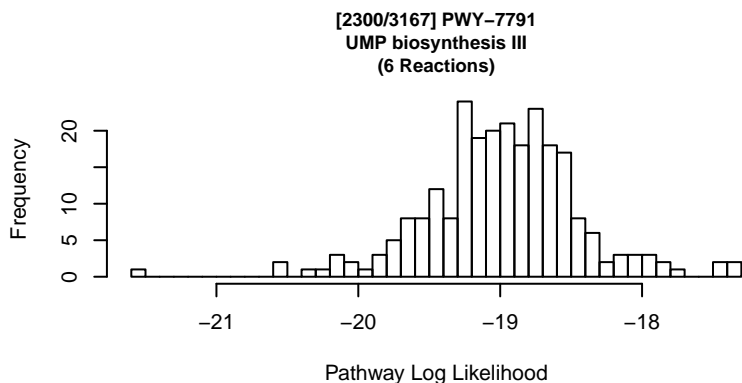
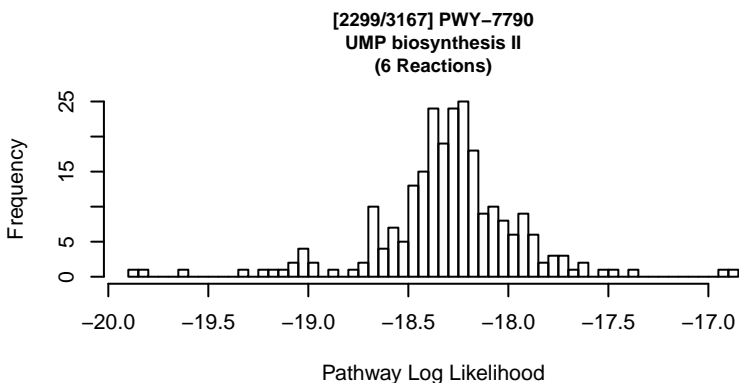
Missing 2 Reaction(s) from Pathway.

[2297/3167] PWY-7788
erythritol degradation II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2298/3167] PWY-7789
erythritol degradation I
(6 Reactions)

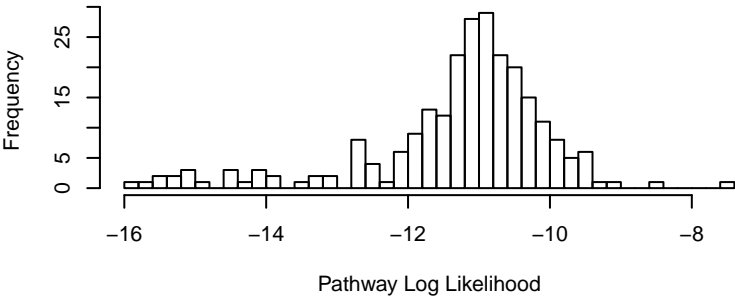
Missing 4 Reaction(s) from Pathway.



[2301/3167] PWY-7793
dimethyl sulfide biosynthesis from methionine
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

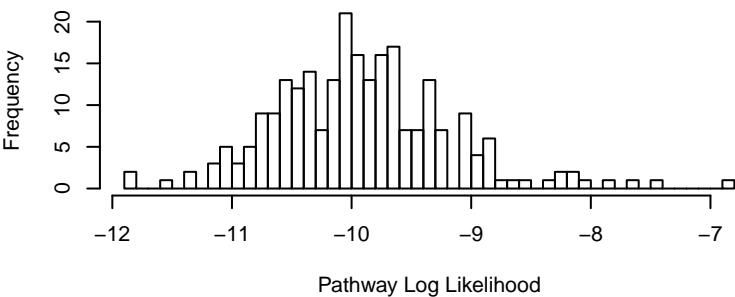
[2302/3167] PWY-7794
polyethylene terephthalate degradation
(2 Reactions)



[2303/3167] PWY-7795
terephthalate degradation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2304/3167] PWY-7796
pentose phosphate pathway (oxidative branch) II
(2 Reactions)



[2305/3167] PWY-7797
nocardicin A biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[2306/3167] PWY-7798
protein *S*-nitrosylation and denitrosylation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

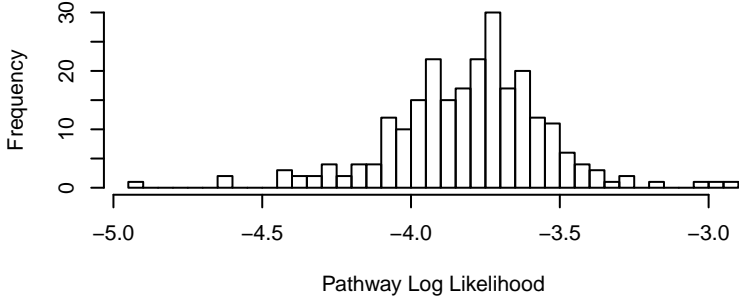
[2307/3167] PWY-7799
Arg/N-end rule pathway (eukaryotic)
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

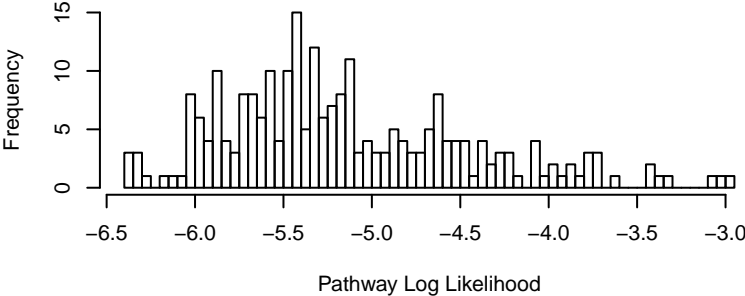
[2308/3167] PWY-7800
Ac/N-end rule pathway
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2309/3167] PWY-7801
N-end rule pathway I (prokaryotic)
(1 Reactions)



[2310/3167] PWY-7802
N-end rule pathway II (prokaryotic)
(1 Reactions)



[2311/3167] PWY-7803
tRNA splicing II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

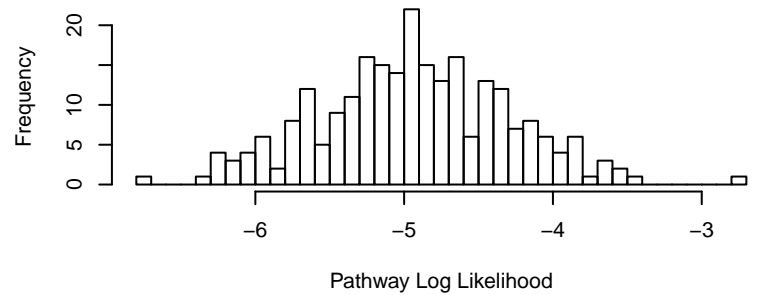
[2312/3167] PWY-7804
glyphosate degradation I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

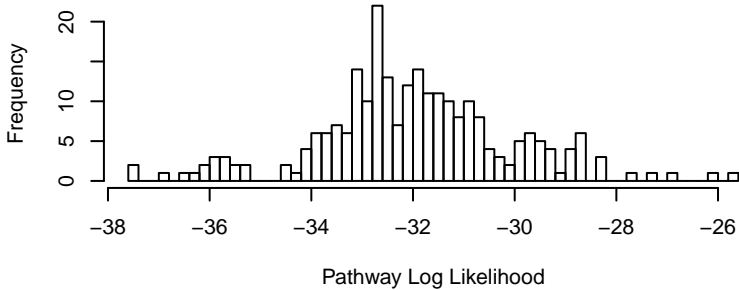
[2313/3167] PWY-7805
(aminomethyl)phosphonate degradation
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[2314/3167] PWY-7806
glyphosate degradation II
(1 Reactions)



[2315/3167] PWY-7807
glyphosate degradation III
(7 Reactions)



[2316/3167] PWY-7808
tetracycline resistance
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2317/3167] PWY-7810
chlorotetracycline biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

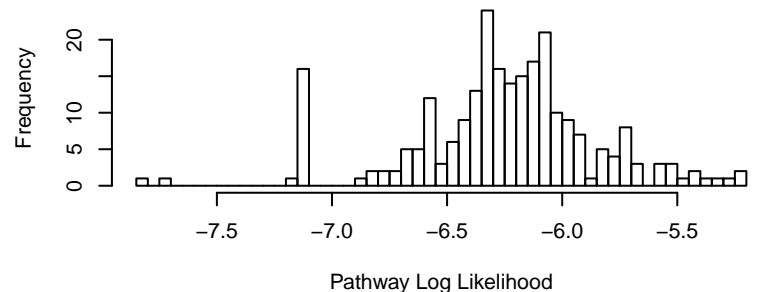
[2318/3167] PWY-7811
6-methylpretetramide biosynthesis
(8 Reactions)

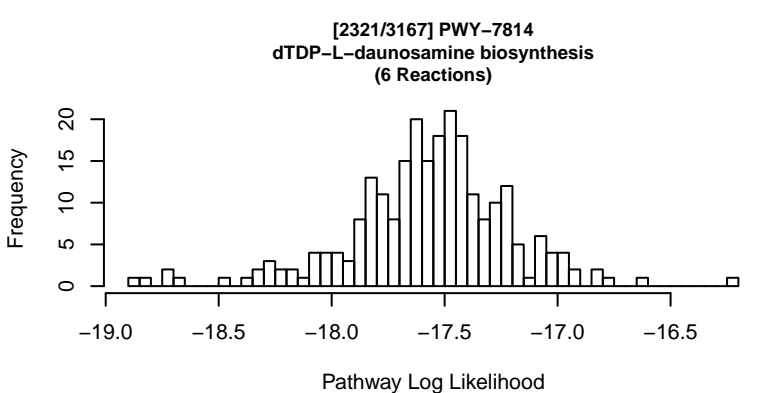
Missing 7 Reaction(s) from Pathway.

[2319/3167] PWY-7812
tetracycline and oxytetracycline biosynthesis
(7 Reactions)

Missing 6 Reaction(s) from Pathway.

[2320/3167] PWY-7813
thiosulfate disproportionation III (quinone)
(1 Reactions)





[2322/3167] PWY-7815
poly(ribitol phosphate) wall teichoic acid biosynthesis I (<i>B. subtilis</i>)
(15 Reactions)

Missing 6 Reaction(s) from Pathway.

[2323/3167] PWY-7816
poly(ribitol phosphate) wall teichoic acid biosynthesis II (<i>S. aureus</i>)
(16 Reactions)

Missing 7 Reaction(s) from Pathway.

[2324/3167] PWY-7817
type I lipoteichoic acid biosynthesis (<i>S. aureus</i>)
(14 Reactions)

Missing 4 Reaction(s) from Pathway.

[2325/3167] PWY-7818
type IV lipoteichoic acid biosynthesis (<i>S. pneumoniae</i>)
(11 Reactions)

Missing 3 Reaction(s) from Pathway.

[2326/3167] PWY-7819
O-β-D-glucopyranosyl-<i>N</i>-acetylgalactosamine 1-phosphate) wall teichoic acid
(8 Reactions)

Missing 3 Reaction(s) from Pathway.

[2327/3167] PWY-782
glycolipid desaturation
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[2328/3167] PWY-7820
teichuronic acid biosynthesis (<i>B. subtilis</i> 168)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[2329/3167] PWY-7821
tunicamycin biosynthesis
(9 Reactions)

Missing 7 Reaction(s) from Pathway.

[2330/3167] PWY-7822
chitin degradation III (Serratia)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

**[2331/3167] PWY-7823
chlorzoxazone degradation
(1 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2332/3167] PWY-7824
prunasin and amygdalin biosynthesis
(4 Reactions)**

Missing 3 Reaction(s) from Pathway.

**[2333/3167] PWY-7825
juglone degradation
(2 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2334/3167] PWY-7826
<i>Amaryllidacea</i> alkaloids biosynthesis
(14 Reactions)**

Missing 3 Reaction(s) from Pathway.

**[2335/3167] PWY-7828
cyclobis-(1\rightarrow6)-α-nigerosyl degradation
(1 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2336/3167] PWY-7831
ABH and Lewis epitopes biosynthesis from type 2 precursor disaccharide
(7 Reactions)**

Missing 4 Reaction(s) from Pathway.

**[2337/3167] PWY-7832
ABH and Lewis epitopes biosynthesis from type 1 precursor disaccharide
(6 Reactions)**

Missing 3 Reaction(s) from Pathway.

**[2338/3167] PWY-7833
biosynthesis of Lewis epitopes (H. pylori)
(7 Reactions)**

Missing 6 Reaction(s) from Pathway.

**[2339/3167] PWY-7836
ganglio-series glycosphingolipids biosynthesis
(9 Reactions)**

Missing 8 Reaction(s) from Pathway.

**[2340/3167] PWY-7837
i antigen and I antigen biosynthesis
(3 Reactions)**

Missing 2 Reaction(s) from Pathway.

[2341/3167] PWY-7838
globo-series glycosphingolipids biosynthesis
(7 Reactions)

Missing 5 Reaction(s) from Pathway.

[2342/3167] PWY-7839
lacto-series glycosphingolipids biosynthesis
(7 Reactions)

Missing 5 Reaction(s) from Pathway.

[2343/3167] PWY-7840
gala-series glycosphingolipids biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[2344/3167] PWY-7841
neolacto-series glycosphingolipids biosynthesis
(7 Reactions)

Missing 6 Reaction(s) from Pathway.

[2345/3167] PWY-7842
UDP-yelosamine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2346/3167] PWY-7844
heme degradation III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2347/3167] PWY-7845
heme degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2348/3167] PWY-7846
heme degradation V
(2 Reactions)

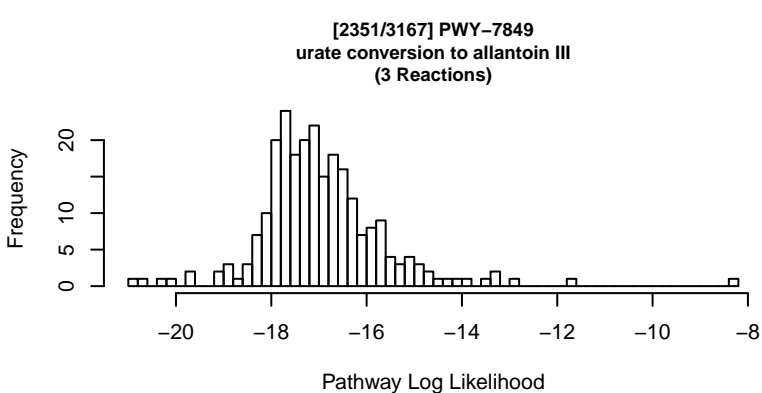
Missing ALL Reaction(s) from Pathway.

[2349/3167] PWY-7847
heme degradation VI
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2350/3167] PWY-7848
heme degradation VII
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[2352/3167] PWY-7850
taurine biosynthesis II
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[2353/3167] PWY-7851
coenzyme A biosynthesis II (eukaryotic)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2354/3167] PWY-7852
6-hydroxymethyl-dihydropterin diphosphate biosynthesis IV (Plasmodium)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2355/3167] PWY-7853
6-hydroxymethyl-dihydropterin diphosphate biosynthesis V (<i>Pyrococcus</i>)
(4 Reactions)

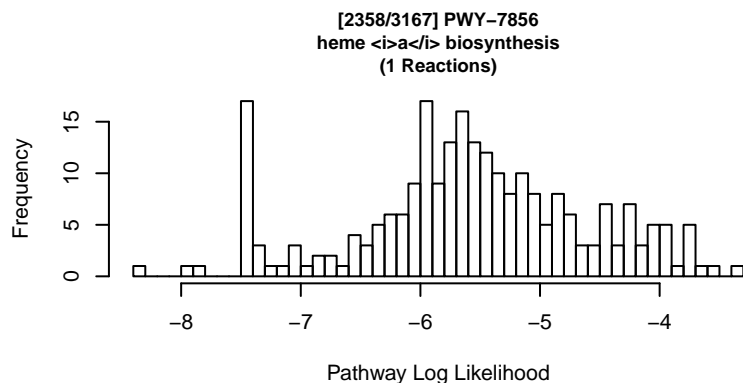
Missing 2 Reaction(s) from Pathway.

[2356/3167] PWY-7854
crotonyl-CoA/ethylmalonyl-CoA/hydroxybutyryl-CoA cycle (engineered)
(13 Reactions)

Missing 4 Reaction(s) from Pathway.

[2357/3167] PWY-7855
ectoine degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.



[2359/3167] PWY-7857
adlupulone and adhumulone biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[2360/3167] PWY-7858
(5Z)-dodecenoate biosynthesis II
(7 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2361/3167] PWY-7859
jasmonoyl-L-isoleucine inactivation
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

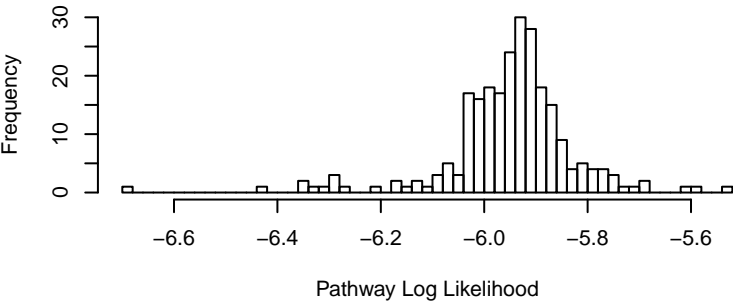
[2362/3167] PWY-7861
<i>N</i>-hydroxy-L-pipecolate biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2363/3167] PWY-7862
D-altritol and galactitol degradation
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[2364/3167] PWY-7863
roseoflavin biosynthesis
(2 Reactions)



[2365/3167] PWY-7864
8-methylmenaquinone biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2366/3167] PWY-7865
coenzyme B/coenzyme M regeneration II (ferredoxin-dependent)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2367/3167] PWY-7866
coenzyme B/coenzyme M regeneration III (coenzyme F₄₂₀-dependent)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2368/3167] PWY-7867
coenzyme B/coenzyme M regeneration IV (H₂-dependent)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2369/3167] PWY-7868
coenzyme B/coenzyme M regeneration V (formate-dependent)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2370/3167] PWY-7869
<i>cis</i>-alkene biosynthesis
(4 Reactions)

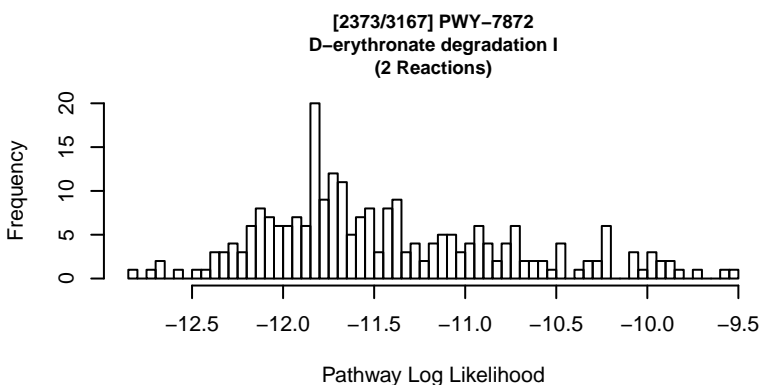
Missing 3 Reaction(s) from Pathway.

[2371/3167] PWY-7870
L-cysteine biosynthesis VII (from $\text{S}^{\text{--}}\text{-sulfo-L-cysteine}$)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2372/3167] PWY-7871
D-threonate degradation
(2 Reactions)

Zeros/Inf for reaction(s) in Pathway



[2374/3167] PWY-7873
D-erythronate degradation II
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2375/3167] PWY-7874
L-threonate degradation
(4 Reactions)

Zeros/Inf for reaction(s) in Pathway

[2376/3167] PWY-7878
A-factor γ -butyrolactone biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2377/3167] PWY-7880
coelimycin P1 biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2378/3167] PWY-7881
virginiae butanolide type γ -butyrolactones biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

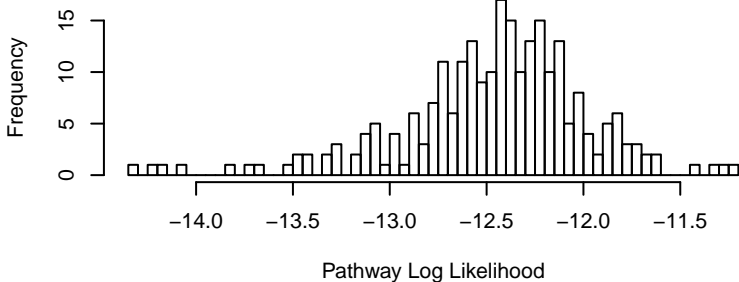
[2379/3167] PWY-7882
IM-2 type γ -butyrolactones biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[2380/3167] PWY-7883
anhydromuropeptides recycling II
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[2381/3167] PWY-7884
lipoprotein posttranslational modification
(4 Reactions)



[2382/3167] PWY-7885
phosphatidylinositol mannoside biosynthesis
(8 Reactions)

Missing 6 Reaction(s) from Pathway.

[2383/3167] PWY-7886
cell-surface glycoconjugate-linked phosphocholine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

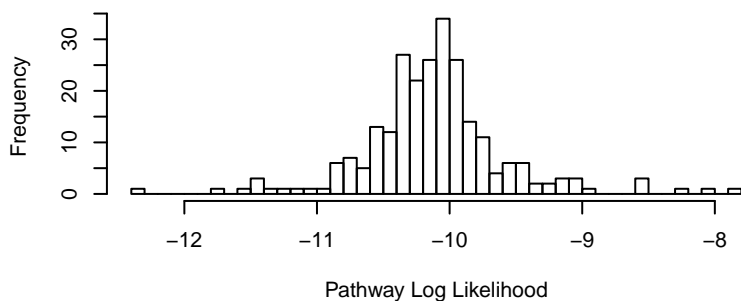
[2384/3167] PWY-7887
protein SAMPylation and SAMP-mediated thiolation
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

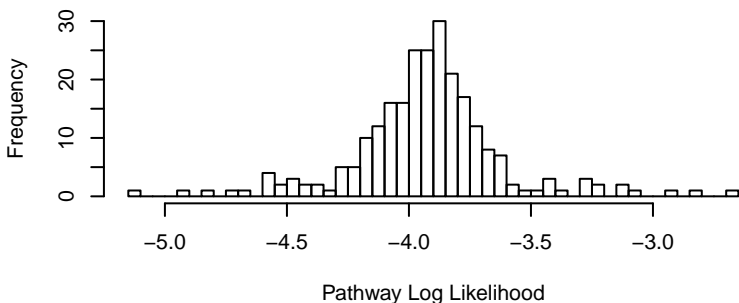
[2385/3167] PWY-7888
tRNA-uridine 2-thiolation (cytoplasmic)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

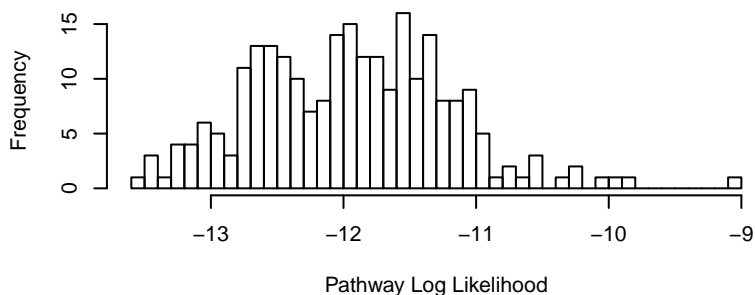
[2386/3167] PWY-7889
tRNA-uridine 2-thiolation (mammalian mitochondria)
(2 Reactions)



[2387/3167] PWY-7891
tRNA-uridine 2-thiolation (yeast mitochondria)
(1 Reactions)



[2388/3167] PWY-7892
tRNA-uridine 2-thiolation and selenation (bacteria)
(3 Reactions)

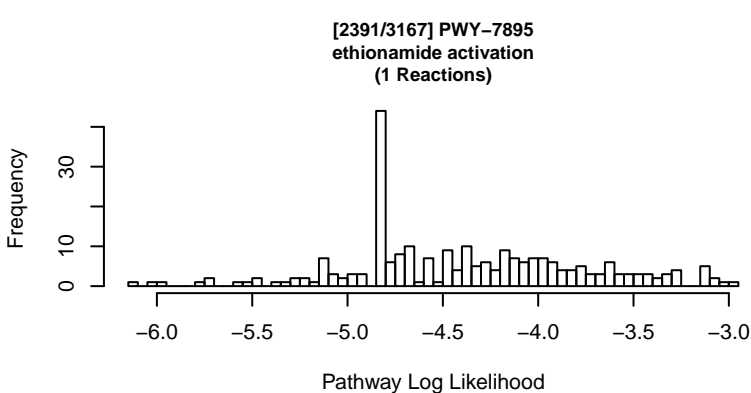


[2389/3167] PWY-7893
protein Pupylation and dePupylation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2390/3167] PWY-7894
procollagen hydroxylation and glycosylation
(6 Reactions)

Missing 5 Reaction(s) from Pathway.



[2392/3167] PWY-7897
flavonoid di-C-glucosylation
(8 Reactions)

Missing 4 Reaction(s) from Pathway.

[2393/3167] PWY-7898
4,4'-disulfanediyldibutanoate degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2394/3167] PWY-7899
protein NEDDylation
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2395/3167] PWY-7900
glycogen biosynthesis III (from α -maltose 1-phosphate)
(8 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2396/3167] PWY-7901
glucosinolate biosynthesis from tyrosine
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[2397/3167] PWY-7902
glucosylglycerol biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2398/3167] PWY-7904
tRNA-uridine 2-thiolation (thermophilic bacteria)
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

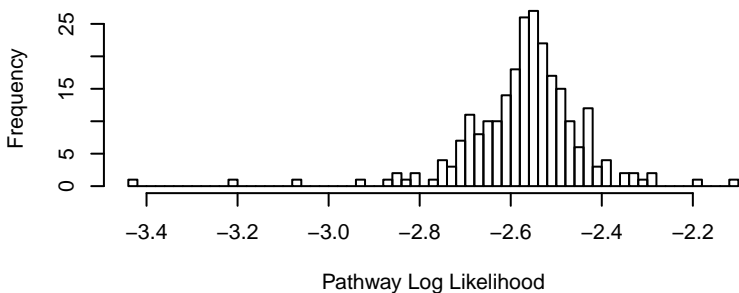
[2399/3167] PWY-7905
***Escherichia coli* serotype O:9a O antigen biosynthesis**
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[2400/3167] PWY-7906
rhizobitoxine biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

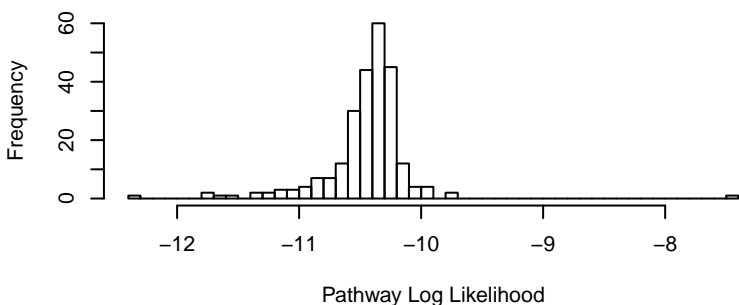
[2401/3167] PWY-7907
(2S,3E)-2-amino-4-methoxy-but-3-enoate biosynthesis
(1 Reactions)



[2402/3167] PWY-7908
formaldehyde oxidation V (bacillithiol-dependent)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2403/3167] PWY-7909
formaldehyde oxidation VII (THF pathway)
(3 Reactions)



[2404/3167] PWY-7910
homofuraneol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2405/3167] PWY-7911
6'-dechloromelleolide F biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2406/3167] PWY-7912
dinoflagellate bioluminescence
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2407/3167] PWY-7913
firefly bioluminescence
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2408/3167] PWY-7914
coral bioluminescence
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2409/3167] PWY-7917
pheomelanin biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2410/3167] PWY-7918
protein *N*-glycosylation processing phase (yeast)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

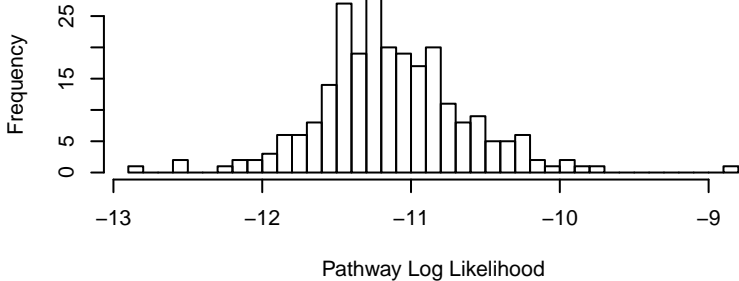
[2411/3167] PWY-7919
protein <i>N</i>-glycosylation processing phase (plants and animals)
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[2412/3167] PWY-7920
complex <i>N</i>-linked glycan biosynthesis (plants)
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

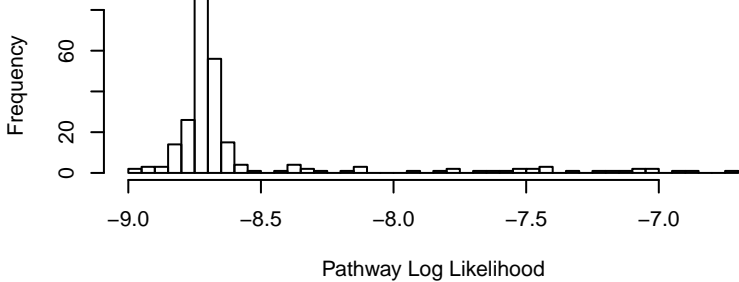
[2413/3167] PWY-7921
protein <i>O</i>-mannosylation I (yeast)
(3 Reactions)



[2414/3167] PWY-7922
protein <i>O</i>-mannosylation II (mammals, core M1 and core M2)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2415/3167] PWY-7923
archaeosine biosynthesis II
(2 Reactions)



[2416/3167] PWY-7924
rubber degradation I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2417/3167] PWY-7925
rubber degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

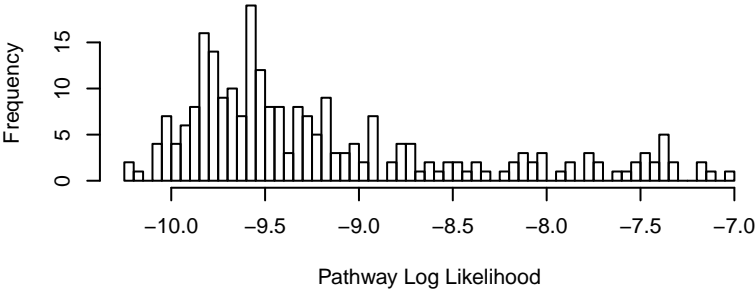
[2418/3167] PWY-7926
carbon disulfide oxidation III (metazoa)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2419/3167] PWY-7927
sulfide oxidation IV (mitochondria)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2420/3167] PWY-7928
nickel cofactor biosynthesis
(2 Reactions)



[2421/3167] PWY-7929
polybrominated phenols biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2422/3167] PWY-7930
pyoluteorin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2423/3167] PWY-7931
brominated pyrroles biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2424/3167] PWY-7932
polybrominated biphenyls and diphenyl ethers biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2425/3167] PWY-7934
polybrominated dihydroxylated diphenyl ethers biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

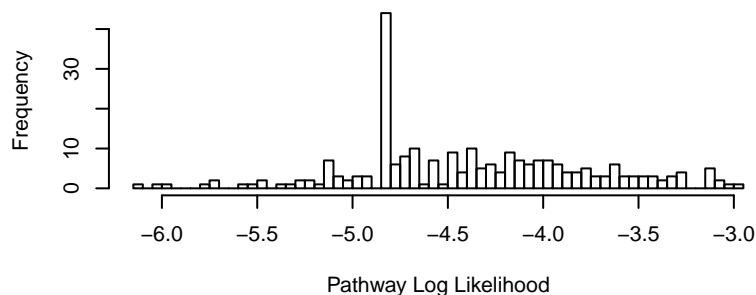
[2426/3167] PWY-7935
spongiadiotoxin C biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2427/3167] PWY-7936
psilocybin biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[2428/3167] PWY-7937
fungal bioluminescence
(1 Reactions)



[2429/3167] PWY-7938
isorenieratene biosynthesis I (actinobacteria)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2430/3167] PWY-7939
chlorobactene biosynthesis
(2 Reactions)

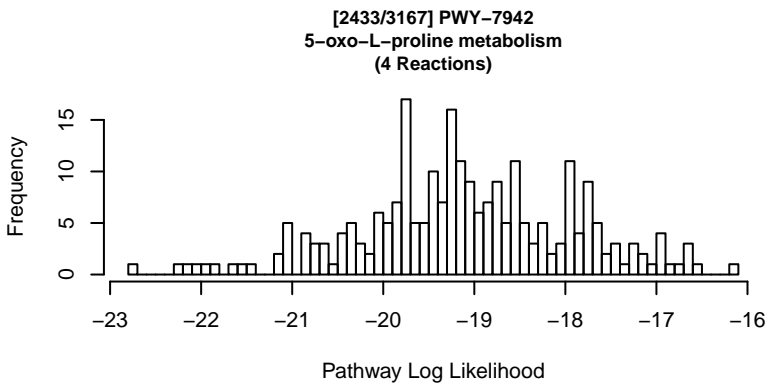
Missing 1 Reaction(s) from Pathway.

[2431/3167] PWY-7940
lauryl-hydroxychlorobactene glucoside biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2432/3167] PWY-7941
isorenieratene biosynthesis II (<i>Chlorobiaceae</i>)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[2434/3167] PWY-7944
bacterioruberin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2435/3167] PWY-7945
2,2'-bis-(4-hydroxy-3-methybut-2-enyl)-β, β-carotene monoglucoside biosynt
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[2436/3167] PWY-7946
sarcinaxanthin diglucoside biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2437/3167] PWY-7947
flexixanthin biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[2438/3167] PWY-7948
4-oxopentanoate degradation
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[2439/3167] PWY-7949
diadinoxanthin and diatoxanthin interconversion
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2440/3167] PWY-7950
diadinoxanthin and fucoxanthin biosynthesis
(3 Reactions)

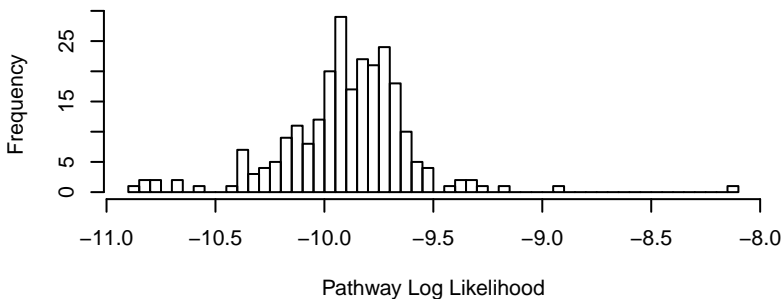
Missing 1 Reaction(s) from Pathway.

<p>[2441/3167] PWY-7953 P-<i>N</i>-acetylmuramoyl-pentapeptide biosynthesis III (<i>meso</i>-diaminopimelate co (8 Reactions)</p> <p>Zeros/-Inf for reaction(s) in Pathway</p>	<p>[2442/3167] PWY-7954 tabtoxinine-β-lactam biosynthesis (3 Reactions)</p> 
<p>[2443/3167] PWY-7955 paerucumarin biosynthesis (2 Reactions)</p> <p>Missing ALL Reaction(s) from Pathway.</p>	<p>[2444/3167] PWY-7956 3-[(<i>E</i>)-2-isocyanoethenyl]-1<i>H</i>-indole biosynthesis (2 Reactions)</p> <p>Missing ALL Reaction(s) from Pathway.</p>
<p>[2445/3167] PWY-7957 hapalindole H biosynthesis (4 Reactions)</p> <p>Missing ALL Reaction(s) from Pathway.</p>	<p>[2446/3167] PWY-7958 12-<i>epi</i>-fischerindole biosynthesis (5 Reactions)</p> <p>Missing ALL Reaction(s) from Pathway.</p>
<p>[2447/3167] PWY-7959 12-<i>epi</i>-hapalindole biosynthesis (4 Reactions)</p> <p>Missing ALL Reaction(s) from Pathway.</p>	<p>[2448/3167] PWY-7960 rhabduscin biosynthesis (3 Reactions)</p> <p>Missing 2 Reaction(s) from Pathway.</p>
<p>[2449/3167] PWY-7961 phenyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP (3 Reactions)</p> <p>Missing 1 Reaction(s) from Pathway.</p>	<p>[2450/3167] PWY-7962 adenosylcobinamide-GDP biosynthesis from cobyrinate <i>a,c</i>-diamide (3 Reactions)</p> <p>Zeros/-Inf for reaction(s) in Pathway</p>

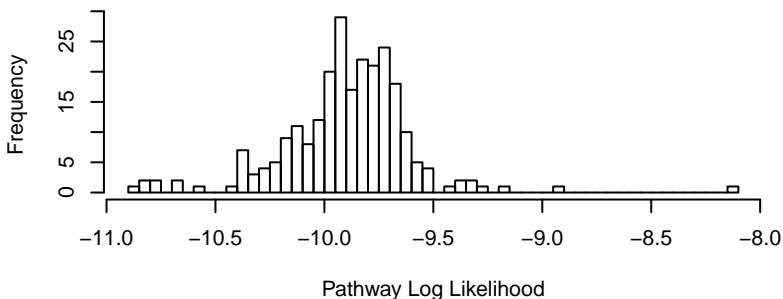
[2451/3167] PWY-7963
4-methylphenyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

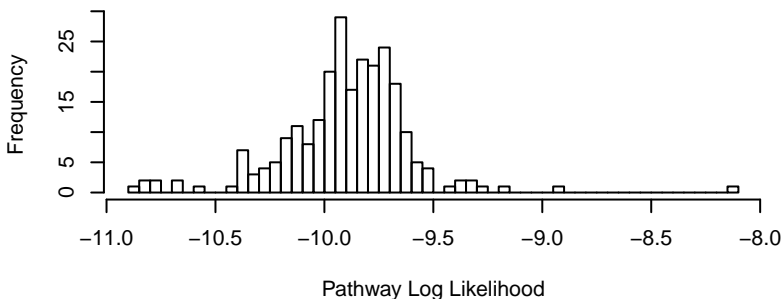
[2452/3167] PWY-7964
adeninyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP
(3 Reactions)



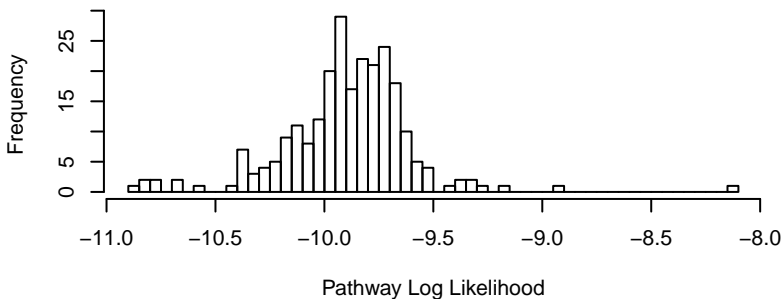
[2453/3167] PWY-7965
2-methyladeninyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP
(3 Reactions)



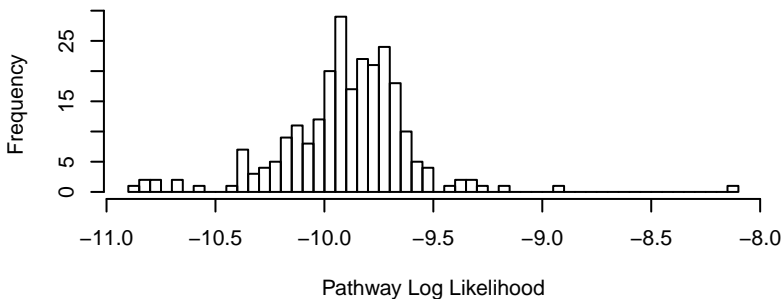
[2454/3167] PWY-7966
6-methoxy-6-methylbenzimidazolyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP
(3 Reactions)



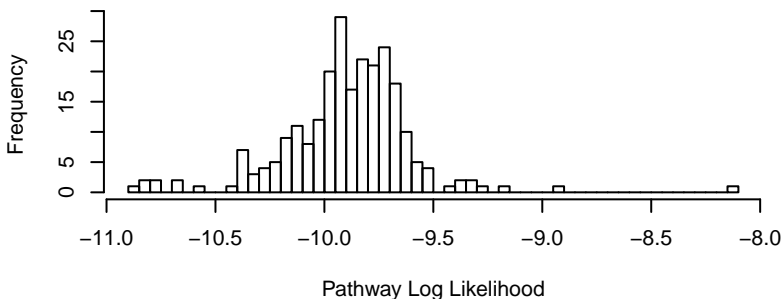
[2455/3167] PWY-7967
5-methoxybenzimidazolyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP
(3 Reactions)



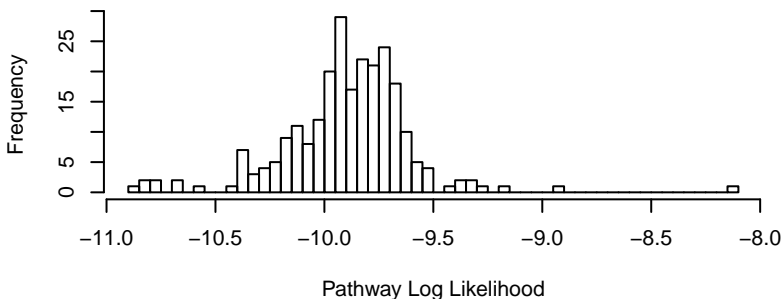
[2456/3167] PWY-7968
5-methylbenzimidazolyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP
(3 Reactions)



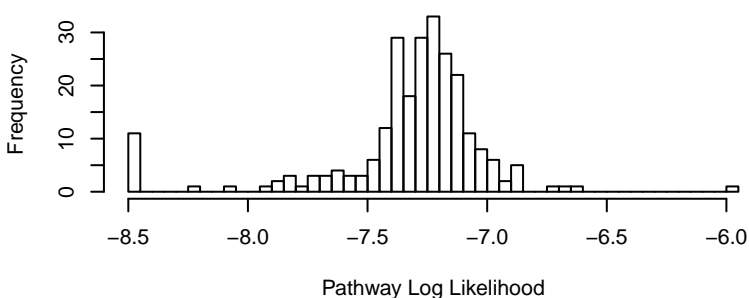
[2457/3167] PWY-7969
5-hydroxybenzimidazolyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP
(3 Reactions)



[2458/3167] PWY-7970
benzimidazolyl adenosylcobamide biosynthesis from adenosylcobinamide-GDP
(3 Reactions)



[2459/3167] PWY-7971
adenosylcobinamide-GDP salvage from cobinamide I
(2 Reactions)



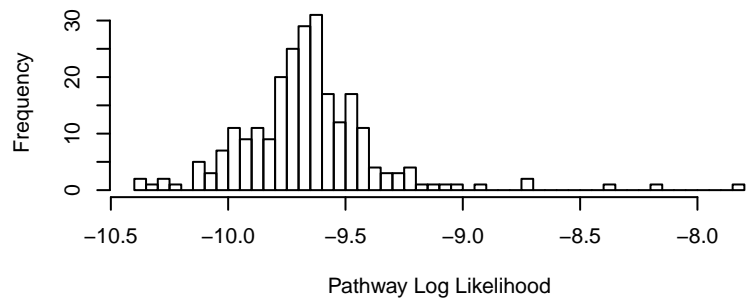
[2460/3167] PWY-7972
adenosylcobinamide-GDP salvage from cobinamide II
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2461/3167] PWY-7974
cobalamin salvage (eukaryotic)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2462/3167] PWY-7975
adenosylcobalamin biosynthesis from adenosylcobinamide-GDP II
(3 Reactions)



[2463/3167] PWY-7976
sulfur reduction III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2464/3167] PWY-7977
L-methionine biosynthesis IV
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

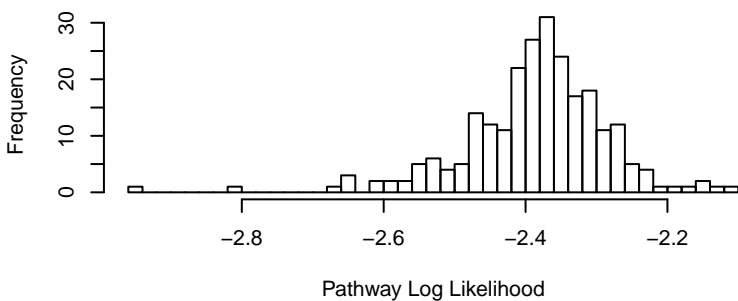
[2465/3167] PWY-7978
***N*-methylpyrrolidone degradation**
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2466/3167] PWY-7979
protein *O*-mannosylation III (mammals, core M3)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[2467/3167] PWY-7980
ATP biosynthesis
(1 Reactions)



[2469/3167] PWY-7982
pinosresinol degradation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2468/3167] PWY-7981
 α -dystroglycan glycosylation
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2470/3167] PWY-7983
pseudomonine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2471/3167] PWY-7984
acinetobactin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

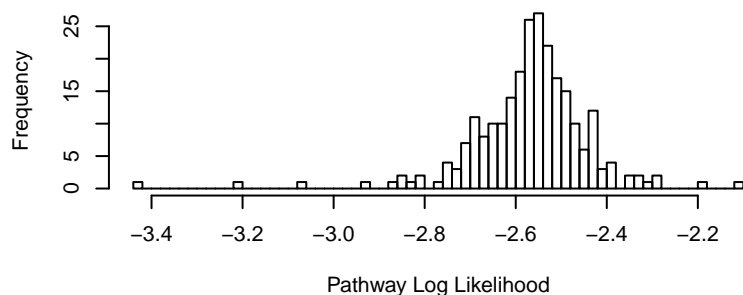
[2472/3167] PWY-7985
oxalate degradation VI
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2473/3167] PWY-7986
anguibactin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2474/3167] PWY-7987
vanchrobactin biosynthesis
(1 Reactions)



[2475/3167] PWY-7988
baumannoferrin biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2476/3167] PWY-7989
acinetoferin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2477/3167] PWY-7990
staphyloferrin A biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2478/3167] PWY-7991
toxoflavin biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2479/3167] PWY-7993
β-dihydromenaquinone-9 biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

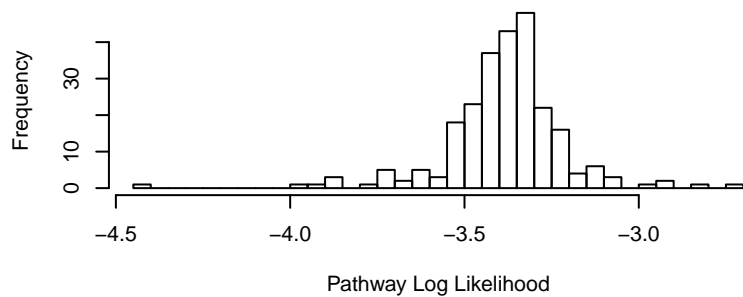
[2480/3167] PWY-7994
dolabraloxins biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

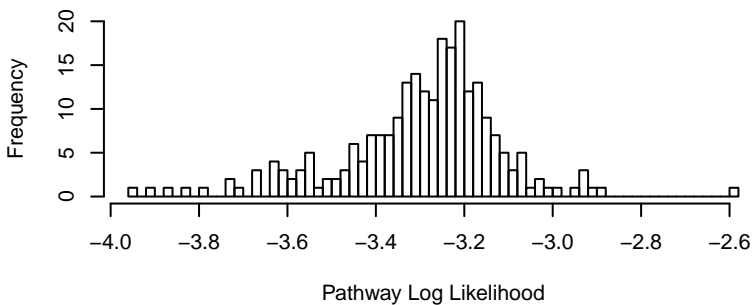
[2481/3167] PWY-7995
tricin biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[2482/3167] PWY-7996
menaquinol-4 biosynthesis I
(1 Reactions)



[2483/3167] PWY-7997
demethylmenaquinol-4 biosynthesis
(1 Reactions)



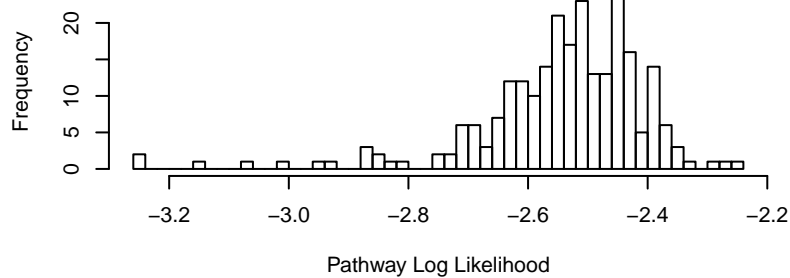
[2484/3167] PWY-7998
menaquinol-4 biosynthesis II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2485/3167] PWY-7999
vitamin K-epoxide cycle
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2486/3167] PWY-8000
vitamin K degradation
(1 Reactions)



[2487/3167] PWY-8001
felinine and 3-methyl-3-sulfanylbutan-1-ol biosynthesis
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

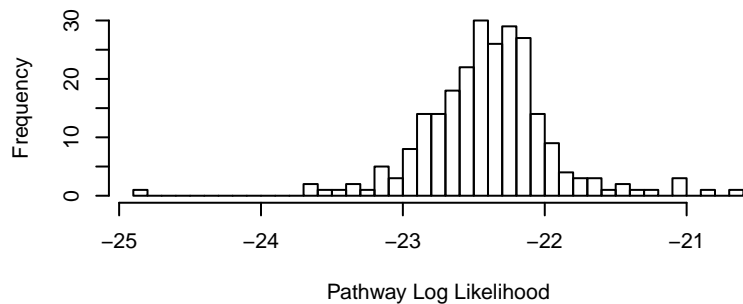
[2488/3167] PWY-8002
4-coumarate degradation (aerobic)
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2489/3167] PWY-8003
***trans*-caffeate degradation (aerobic)**
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2490/3167] PWY-8004
Entner-Doudoroff pathway I
(7 Reactions)



[2491/3167] PWY-8007
staphylopine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

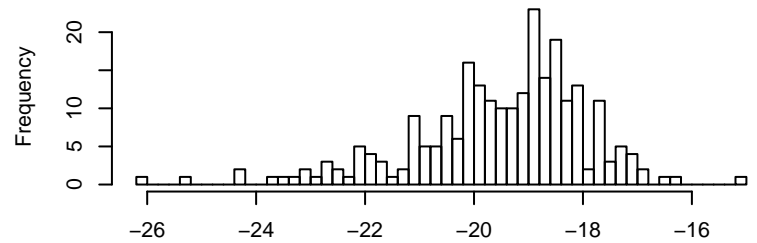
[2492/3167] PWY-8008
staphyloferrin B biosynthesis
(7 Reactions)

Missing 6 Reaction(s) from Pathway.

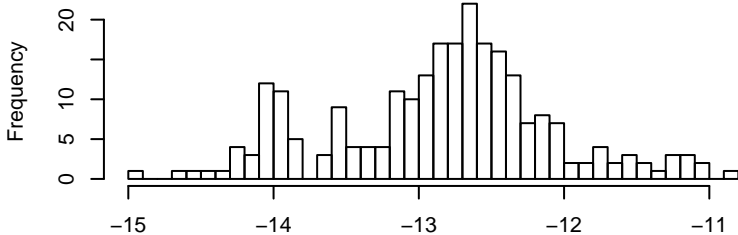
[2493/3167] PWY-8009
L-cysteine biosynthesis VIII (*Thermococcus kodakarensis*)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2494/3167] PWY-801
homocysteine and cysteine interconversion
(4 Reactions)



[2495/3167] PWY-8010
L-cysteine biosynthesis IX (*Trichomonas vaginalis*)
(3 Reactions)



[2496/3167] PWY-8011
L-serine biosynthesis II
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2497/3167] PWY-8012
mupirocin biosynthesis
(17 Reactions)

Missing 16 Reaction(s) from Pathway.

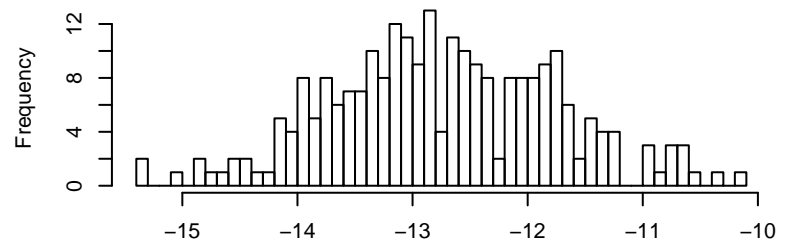
[2498/3167] PWY-8013
UDP-N-acetyl-D-galactosamine biosynthesis III
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[2499/3167] PWY-8014
L-phenylalanine degradation VI (reductive Stickland reaction)
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[2500/3167] PWY-8015
glycine degradation (reductive Stickland reaction)
(3 Reactions)



[2501/3167] PWY-8016
L-tyrosine degradation V (reductive Stickland reaction)
(8 Reactions)

Missing 4 Reaction(s) from Pathway.

[2502/3167] PWY-8017
L-tryptophan degradation XIII (reductive Stickland reaction)
(6 Reactions)

Missing 4 Reaction(s) from Pathway.

[2503/3167] PWY-8018
itaconate biosynthesis II
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2504/3167] PWY-8019
2-hydroxyparaconate and itatartarate biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2505/3167] PWY-8020
D-xylose degradation V
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2506/3167] PWY-8022
salmochelin degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2507/3167] PWY-8023
salmochelin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2508/3167] PWY-8024
4-hydroxyindole-3-carbonyl nitrile biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2509/3167] PWY-8025
cyanuric acid degradation I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2510/3167] PWY-8026
sterol biosynthesis (methylootrophs)
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

**[2511/3167] PWY-8027
parkeol biosynthesis
(1 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2512/3167] PWY-8028
cycloartenol biosynthesis
(1 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2513/3167] PWY-8029
limonene degradation IV (anaerobic)
(7 Reactions)**

Missing 2 Reaction(s) from Pathway.

**[2514/3167] PWY-8030
coptisine biosynthesis
(4 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2515/3167] PWY-8031
epiberberine biosynthesis
(4 Reactions)**

Missing 2 Reaction(s) from Pathway.

**[2516/3167] PWY-8032
chloramphenicol biosynthesis
(8 Reactions)**

Missing 4 Reaction(s) from Pathway.

**[2517/3167] PWY-8033
aureothin biosynthesis
(4 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2518/3167] PWY-8034
spectinabilin biosynthesis
(4 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2519/3167] PWY-8035
streptovaricin biosynthesis
(6 Reactions)**

Missing 4 Reaction(s) from Pathway.

**[2520/3167] PWY-8036
chaxamycin biosynthesis
(6 Reactions)**

Missing 4 Reaction(s) from Pathway.

[2521/3167] PWY-8037
saliniketol A biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2522/3167] PWY-8038
naphthomycin biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[2523/3167] PWY-8039
mitomycin biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2524/3167] PWY-8040
ansatrienin biosynthesis
(8 Reactions)

Missing 6 Reaction(s) from Pathway.

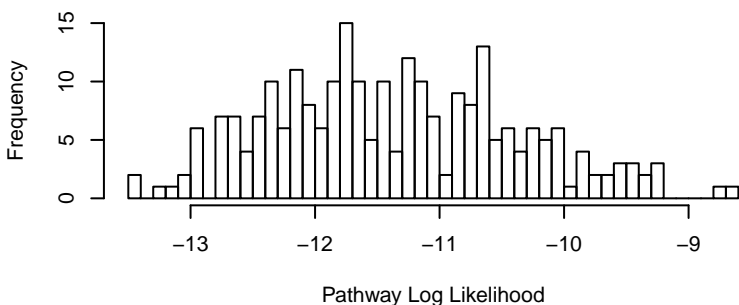
[2525/3167] PWY-8041
ultra-long-chain fatty acid biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2526/3167] PWY-8042
acylceramide biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[2527/3167] PWY-8043
ophthalmate biosynthesis
(3 Reactions)



[2529/3167] PWY-8045
cylindrospermopsin biosynthesis
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[2528/3167] PWY-8044
cyclohexane-1-carboxyl-CoA biosynthesis
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

[2530/3167] PWY-8047
bryostatin biosynthesis
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

**[2531/3167] PWY-8049
pederin biosynthesis
(5 Reactions)**

Missing 2 Reaction(s) from Pathway.

**[2532/3167] PWY-8051
anandamide biosynthesis I
(10 Reactions)**

Missing 3 Reaction(s) from Pathway.

**[2533/3167] PWY-8052
2-arachidonoylglycerol biosynthesis
(6 Reactions)**

Missing 2 Reaction(s) from Pathway.

**[2534/3167] PWY-8053
anandamide biosynthesis II
(8 Reactions)**

Missing 3 Reaction(s) from Pathway.

**[2535/3167] PWY-8055
palmitoyl ethanolamide biosynthesis
(6 Reactions)**

Missing 2 Reaction(s) from Pathway.

**[2536/3167] PWY-8056
anandamide lipoygenation
(3 Reactions)**

Missing 2 Reaction(s) from Pathway.

**[2537/3167] PWY-8058
2-deoxy-D-ribose degradation II
(9 Reactions)**

Missing 2 Reaction(s) from Pathway.

**[2538/3167] PWY-8060
2-deoxy-D-ribose degradation I
(3 Reactions)**

Missing 1 Reaction(s) from Pathway.

**[2539/3167] PWY-8061
8-oxo-(d)GTP detoxification II
(2 Reactions)**

Missing ALL Reaction(s) from Pathway.

**[2540/3167] PWY-8062
sulfoacetaldehyde degradation IV
(3 Reactions)**

Missing 1 Reaction(s) from Pathway.

[2541/3167] PWY-8064
sodorifen biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2542/3167] PWY-8065
chlorpyrifos degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2543/3167] PWY-8066
methylphosphonate degradation III
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2544/3167] PWY-8067
methylphosphonate biosynthesis
(4 Reactions)

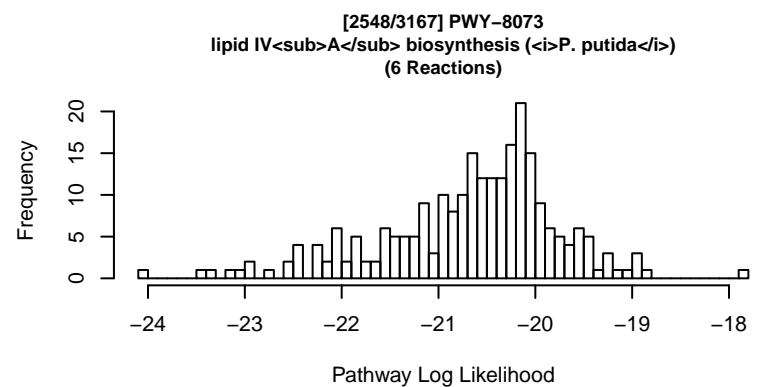
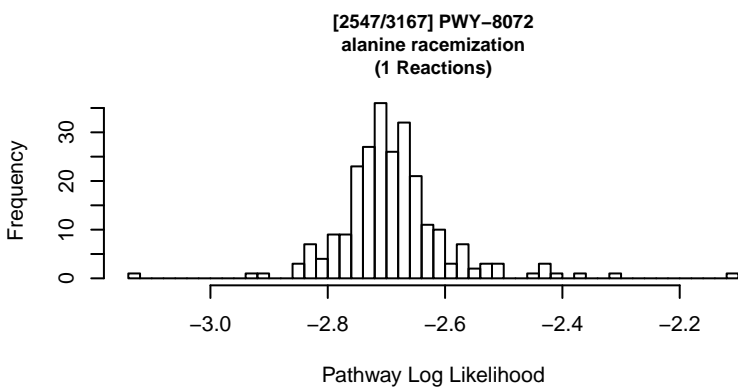
Missing 1 Reaction(s) from Pathway.

[2545/3167] PWY-8069
nepetalactone biosynthesis
(6 Reactions)

Missing ALL Reaction(s) from Pathway.

[2546/3167] PWY-8071
N-3-oxalyl-L-2,3-diaminopropanoate biosynthesis
(3 Reactions)

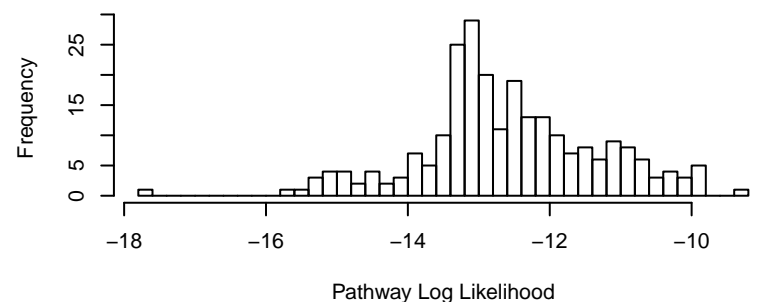
Missing 2 Reaction(s) from Pathway.



[2549/3167] PWY-8074
Kdo transfer to lipid IV_A (*P. putida*)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

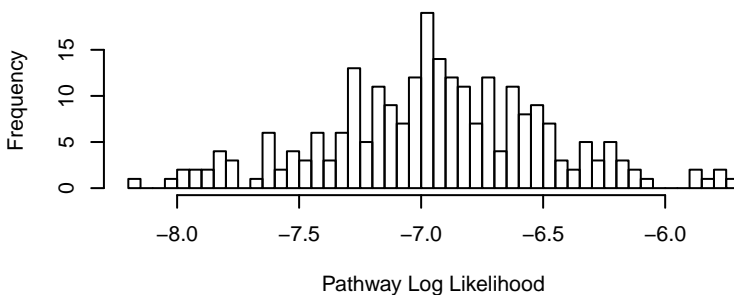
[2550/3167] PWY-8075
(Kdo)₂-lipid A biosynthesis (*P. putida*)
(3 Reactions)



[2551/3167] PWY-8076
8-methylated benzoxazinoid glucoside biosynthesis
(3 Reactions)

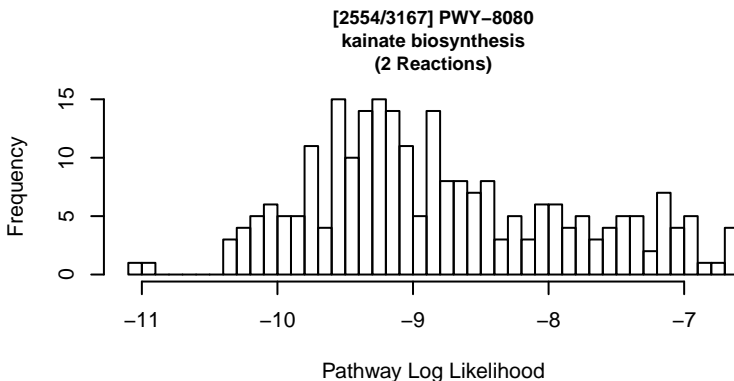
Missing ALL Reaction(s) from Pathway.

[2552/3167] PWY-8077
ginkgotxin biosynthesis
(2 Reactions)



[2553/3167] PWY-8078
quebrachitol biosynthesis
(2 Reactions)

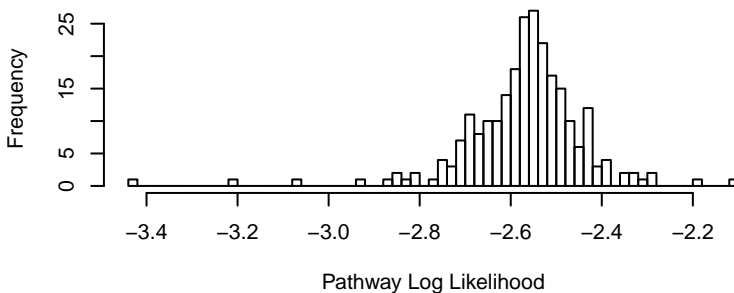
Missing 1 Reaction(s) from Pathway.



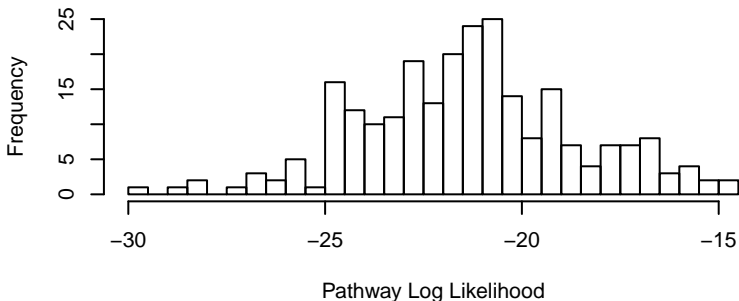
[2555/3167] PWY-8081
leucine-derived hydroxynitrile glucoside biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[2556/3167] PWY-8082
glycine lipid biosynthesis
(1 Reactions)



[2557/3167] PWY-8083
domoic acid biosynthesis
(4 Reactions)



[2558/3167] PWY-8084
daurichromenate biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2559/3167] PWY-8085
picolinate degradation
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

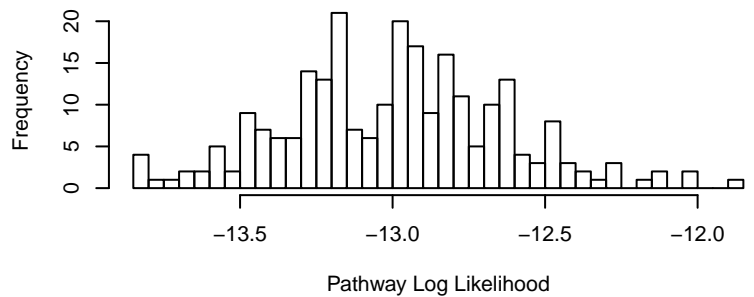
[2560/3167] PWY-8086
(S)-lactate fermentation to propanoate, acetate and hydrogen
(13 Reactions)

Missing 2 Reaction(s) from Pathway.

[2561/3167] PWY-8087
indole-3-acetate degradation II
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2562/3167] PWY-8088
dipicolinate biosynthesis
(4 Reactions)



[2563/3167] PWY-8089
D-apiose degradation I
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2564/3167] PWY-8090
D-apionate degradation II (RLP decarboxylase)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[2565/3167] PWY-8091
D-apionate degradation I (xylose isomerase family decarboxylase)
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[2566/3167] PWY-8092
D-apionate degradation III (RLP transcarboxylase/hydrolase)
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2567/3167] PWY-8093
D-apiose degradation II (to D-apionate)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2568/3167] PWY-8095
5-methoxy-6-methylbenzimidazole biosynthesis (anaerobic)
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

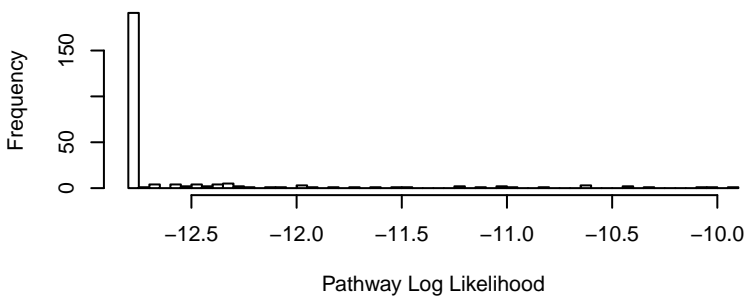
[2569/3167] PWY-8096
5-methoxybenzimidazole biosynthesis (anaerobic)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

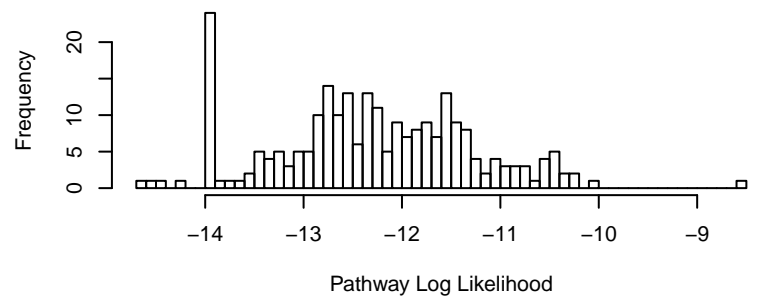
[2570/3167] PWY-8097
5-hydroxybenzimidazole biosynthesis (anaerobic)
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2571/3167] PWY-8098
cyclic 2,3-bisphosphoglycerate biosynthesis
(2 Reactions)



[2572/3167] PWY-8099
tetrahydropteridine recycling
(2 Reactions)



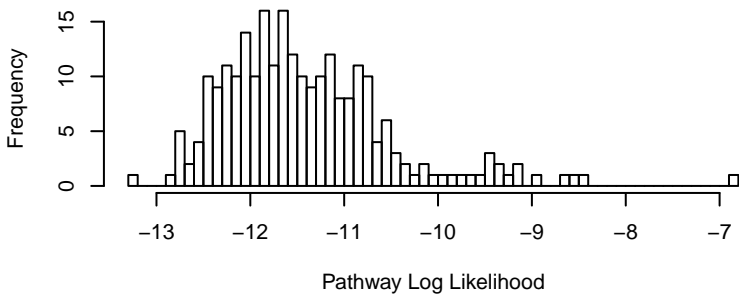
[2573/3167] PWY-81
toluene degradation to benzoyl-CoA (anaerobic)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[2574/3167] PWY-8100
crotonosine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2575/3167] PWY-8101
arsenate detoxification II
(2 Reactions)



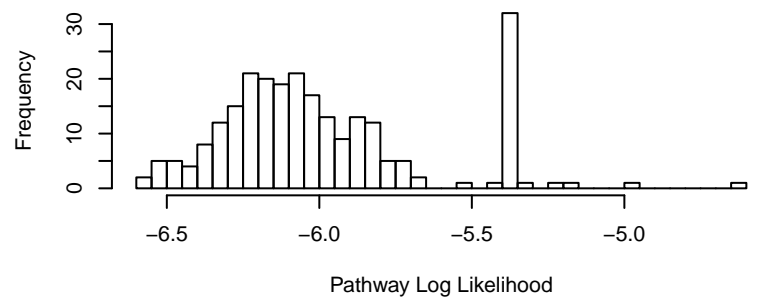
[2576/3167] PWY-8103
kavain biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2577/3167] PWY-8104
yangonin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2578/3167] PWY-8105
queuosine biosynthesis II (queuine salvage)
(1 Reactions)



[2579/3167] PWY-8106
queuosine biosynthesis III (queuosine salvage)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2580/3167] PWY-8107
methanogenesis from glycine betaine
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2581/3167] PWY-8108
glycine betaine degradation III
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2582/3167] PWY-8109
proline betaine degradation II
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

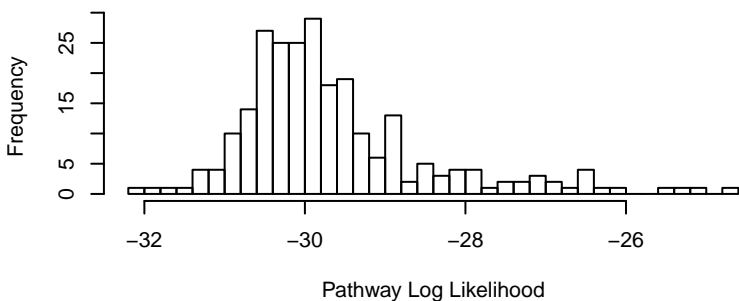
[2583/3167] PWY-8110
L-dopa degradation II (bacterial)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2584/3167] PWY-8111
carbaryl degradation
(6 Reactions)

Missing 5 Reaction(s) from Pathway.

[2585/3167] PWY-8112
factor 420 biosynthesis I (archaea)
(5 Reactions)



[2586/3167] PWY-8113
3PG-factor 420 biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

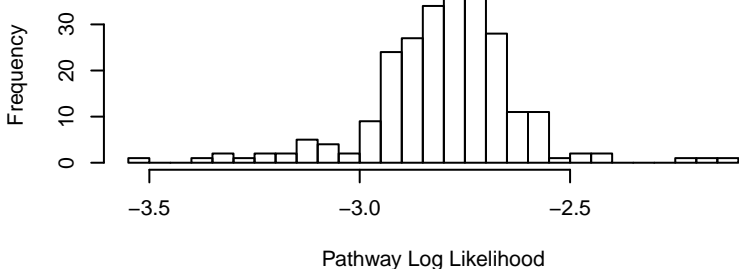
[2587/3167] PWY-8115
long-chain polyamine biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2588/3167] PWY-8116
ochratoxin A biosynthesis
(4 Reactions)

Missing ALL Reaction(s) from Pathway.

[2589/3167] PWY-8117
colibactin biosynthesis
(1 Reactions)



[2590/3167] PWY-8118
patellamide A and C biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2591/3167] PWY-8119
microcin B17 biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2592/3167] PWY-8120
β-alanine degradation III
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2593/3167] PWY-8121
2-deoxy-D-glucose 6-phosphate degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2594/3167] PWY-8122
mycofactocin biosynthesis
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

[2595/3167] PWY-8124
(2-trimethylamino)ethylphosphonate degradation
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2596/3167] PWY-8125
mevalonate pathway IV (archaea)
(9 Reactions)

Missing 2 Reaction(s) from Pathway.

[2597/3167] PWY-8126
chlorophyll *a*₂ biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2598/3167] PWY-8127
chlorophyll *b*₂ biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2599/3167] PWY-8129
cell-surface glycoconjugate-linked phosphonate biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2600/3167] PWY-8130
5'-deoxyadenosine degradation I
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

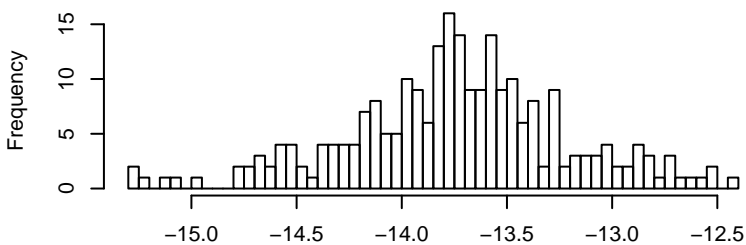
[2601/3167] PWY-8131
5'-deoxyadenosine degradation II
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2602/3167] PWY-8132
<i>S</i>-methyl-5-thio-α-D-ribose 1-phosphate degradation III
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2603/3167] PWY-8133
succinoglycan biosynthesis
(4 Reactions)



Pathway Log Likelihood

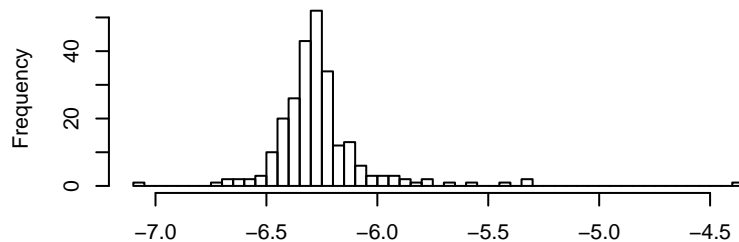
[2604/3167] PWY-8134
bile acid 7β-dehydroxylation
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[2605/3167] PWY-8135
bile acids deconjugation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2606/3167] PWY-8136
NADPH repair (prokaryotes)
(2 Reactions)

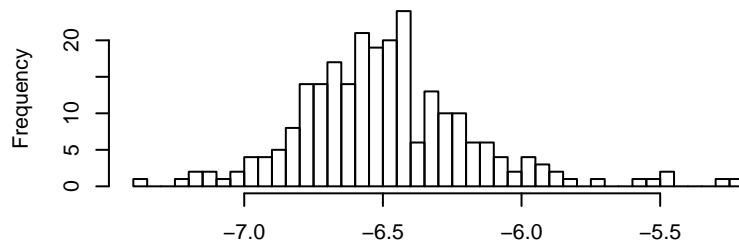


Pathway Log Likelihood

[2607/3167] PWY-8137
NADPH repair (eukaryotes)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2608/3167] PWY-8138
polyphosphate metabolism
(2 Reactions)

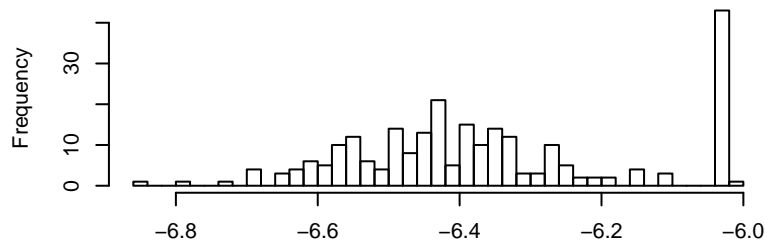


Pathway Log Likelihood

[2609/3167] PWY-8139
CDP-6-deoxy-D-gulose biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2610/3167] PWY-8140
serine racemization
(1 Reactions)



Pathway Log Likelihood

[2611/3167] PWY-8141
9-decynoate biosynthesis
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

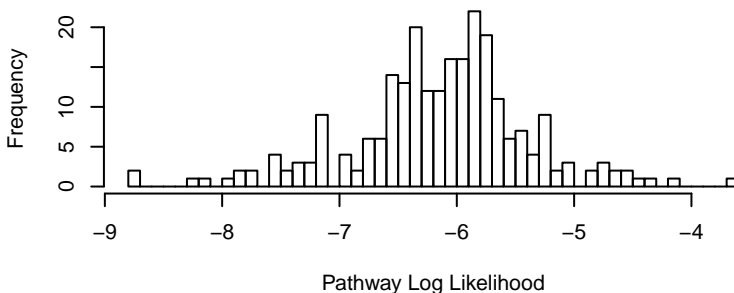
[2612/3167] PWY-8142
L-ascorbate biosynthesis VI (plants, <i>myo</i>-inositol pathway)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2613/3167] PWY-8143
L-ascorbate biosynthesis VII (plants, D-galacturonate pathway)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2614/3167] PWY-8145
cytochrome <i>c</i> biogenesis (system III type)
(1 Reactions)

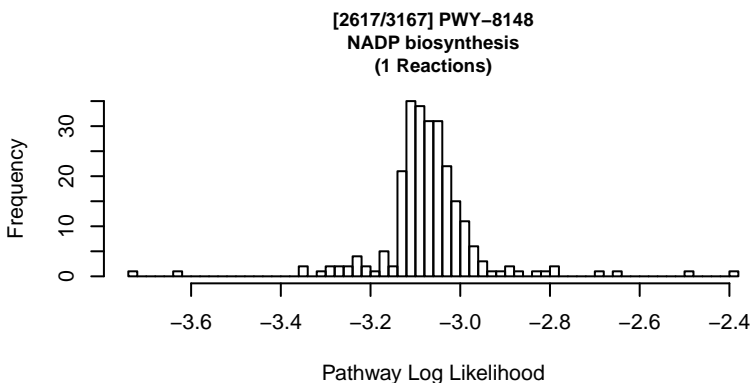


[2615/3167] PWY-8146
cytochrome <i>c</i> biogenesis (system II type)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2616/3167] PWY-8147
cytochrome <i>c</i> biogenesis (system I type)
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[2618/3167] PWY-8149
homospermidine biosynthesis II
(1 Reactions)

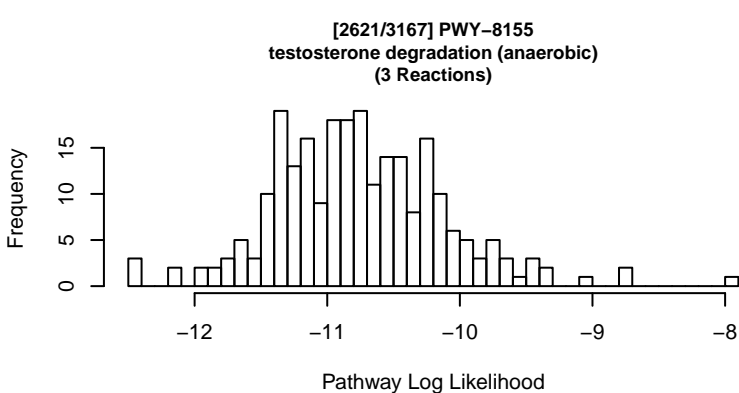
Zeros/-Inf for reaction(s) in Pathway

[2619/3167] PWY-8151
cholesterol degradation to androstenedione III (anaerobic)
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

[2620/3167] PWY-8152
androstenedione degradation II (anaerobic)
(15 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[2622/3167] PWY-8157
avenanthramide biosynthesis
(9 Reactions)

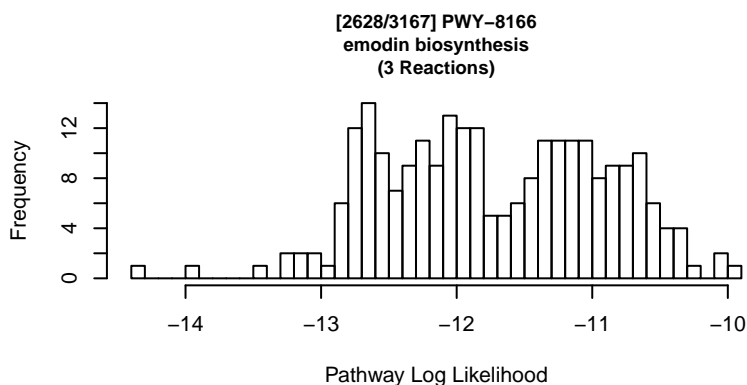
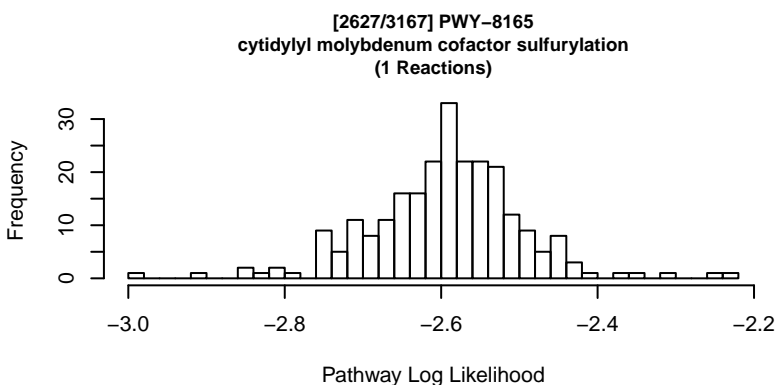
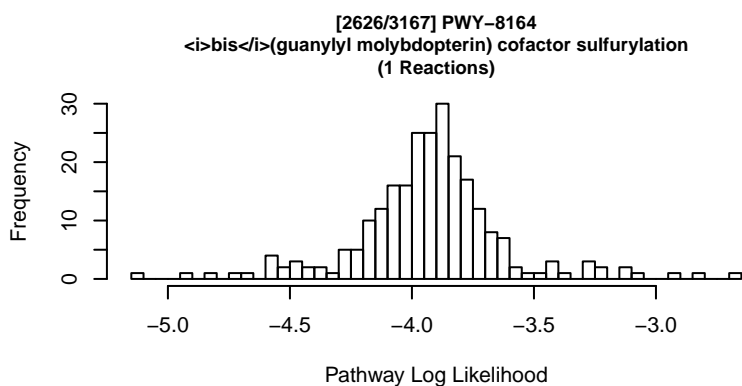
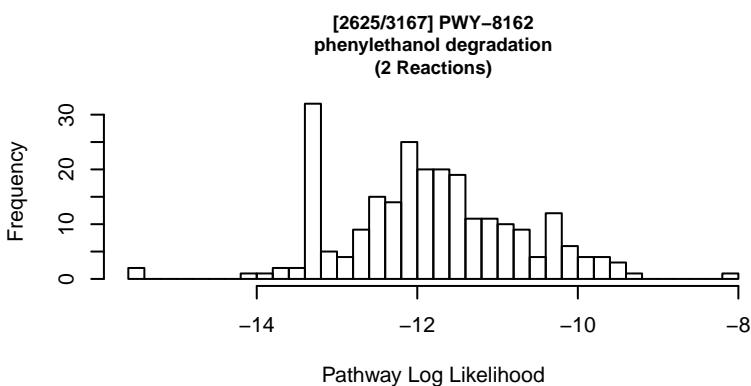
Missing 5 Reaction(s) from Pathway.

[2623/3167] PWY-8158
ibotenate and muscimol biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

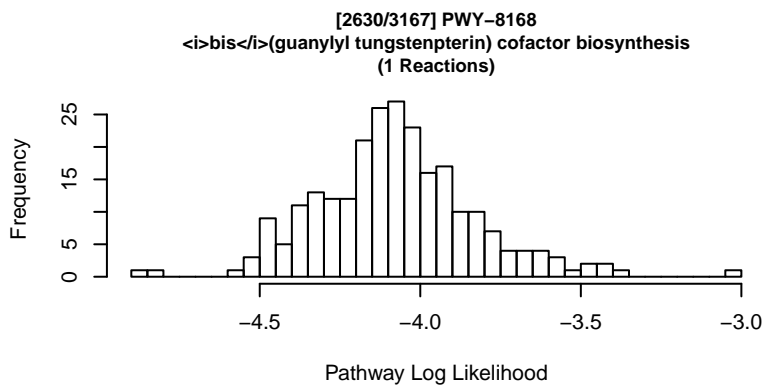
[2624/3167] PWY-8161
D-phenylglycine degradation
(3 Reactions)

Missing 1 Reaction(s) from Pathway.



[2629/3167] PWY-8167
(tungstenpterin) cofactor biosynthesis
(4 Reactions)

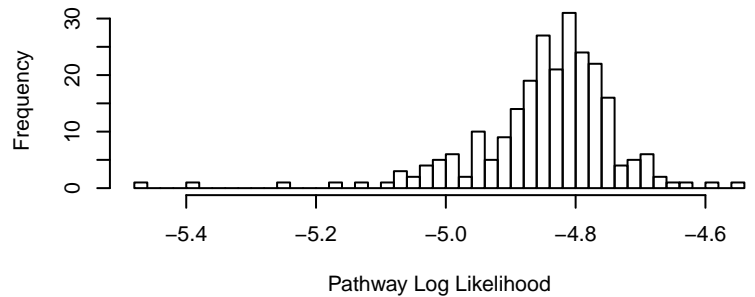
Missing 3 Reaction(s) from Pathway.



[2631/3167] PWY-8171
molybdenum cofactor biosynthesis
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2632/3167] PWY-8172
10-methylstearate biosynthesis
(2 Reactions)



[2633/3167] PWY-8173
<i>anteiso</i>-branched-chain fatty acid biosynthesis
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

[2634/3167] PWY-8174
odd <i>iso</i>-branched-chain fatty acid biosynthesis
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

[2635/3167] PWY-8175
even <i>iso</i>-branched-chain fatty acid biosynthesis
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

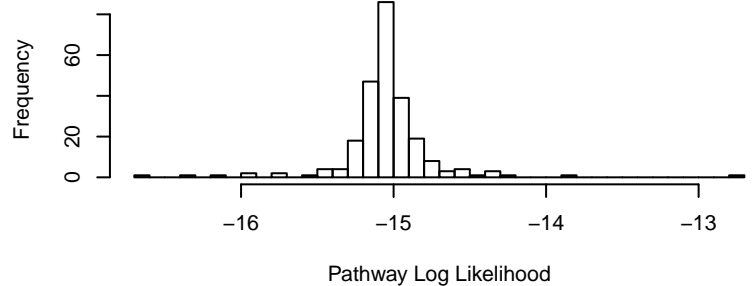
[2636/3167] PWY-8176
geraniol biosynthesis (cytosol)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2637/3167] PWY-8177
nerol biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2638/3167] PWY-8178
pentose phosphate pathway (non-oxidative branch) II
(5 Reactions)



[2639/3167] PWY-8179
platensimycin biosynthesis
(15 Reactions)

Missing 3 Reaction(s) from Pathway.

[2640/3167] PWY-8180
acrylate degradation II
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

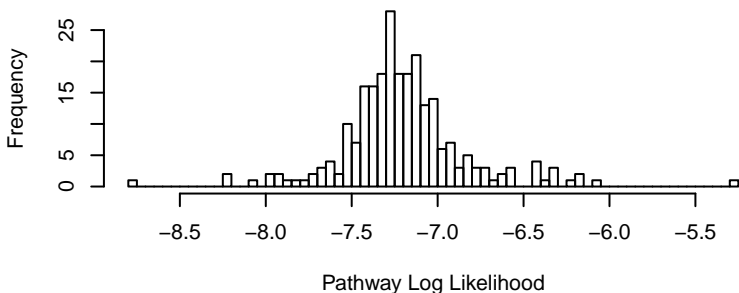
[2641/3167] PWY-8181
2-methyl-branched fatty acid β-oxidation
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

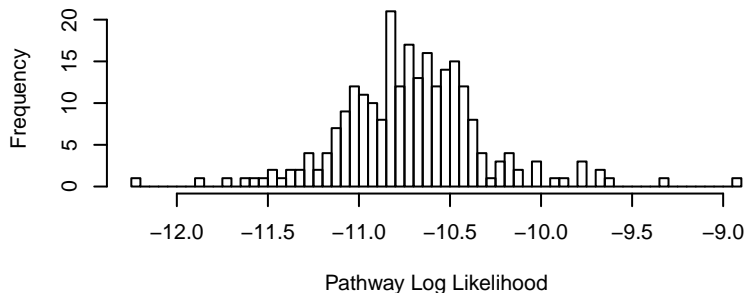
[2642/3167] PWY-8182
valproate β-oxidation
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[2643/3167] PWY-8183
L-valine degradation III (oxidative Stickland reaction)
(2 Reactions)



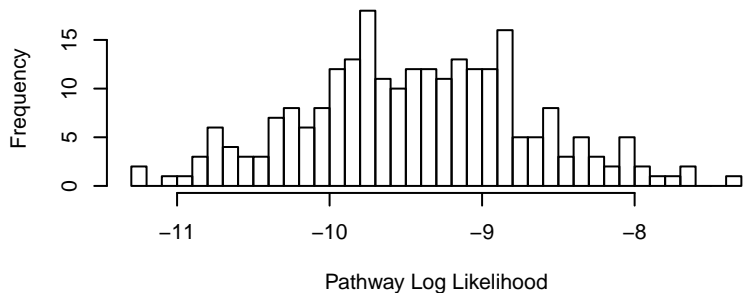
[2644/3167] PWY-8184
L-isoleucine degradation III (oxidative Stickland reaction)
(3 Reactions)



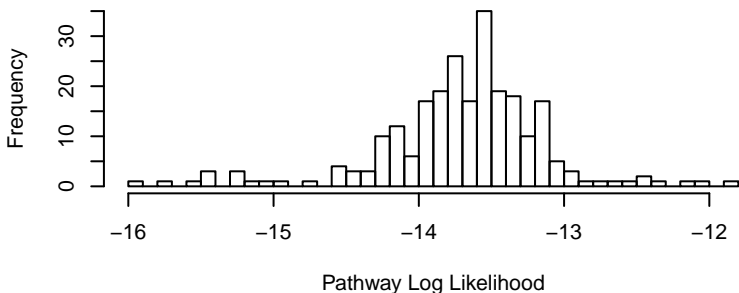
[2645/3167] PWY-8185
L-leucine degradation V (oxidative Stickland reaction)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

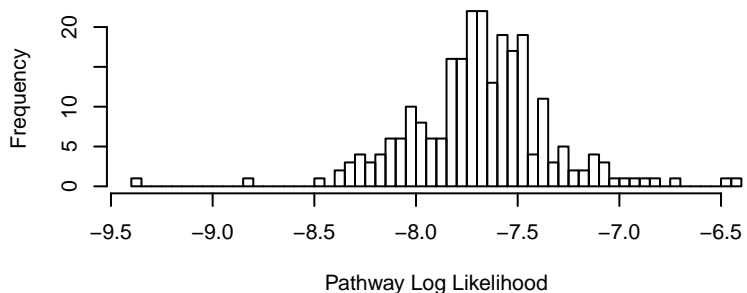
[2646/3167] PWY-8186
L-proline degradation II (reductive Stickland reaction)
(2 Reactions)



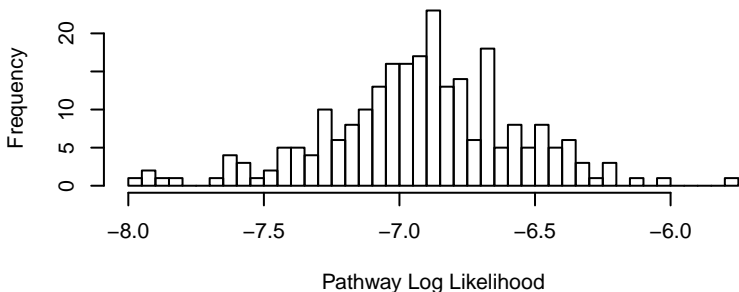
[2647/3167] PWY-8187
L-arginine degradation XIII (reductive Stickland reaction)
(4 Reactions)



[2648/3167] PWY-8188
L-alanine degradation VI (reductive Stickland reaction)
(2 Reactions)



[2649/3167] PWY-8189
L-alanine degradation V (oxidative Stickland reaction)
(2 Reactions)



[2650/3167] PWY-8190
L-glutamate degradation XI (reductive Stickland reaction)
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[2651/3167] PWY-8191
cholesterol biosynthesis (algae, late side-chain reductase)
(11 Reactions)

Missing ALL Reaction(s) from Pathway.

[2652/3167] PWY-8192
<i>Salmonella enterica</i> serotype O:4 O antigen biosynthesis (group B1)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2653/3167] PWY-8193
<i>Salmonella enterica</i> serotype O:8 O antigen biosynthesis
(7 Reactions)

Missing 5 Reaction(s) from Pathway.

[2654/3167] PWY-8195
<i>Salmonella enterica</i> serotype O:9 O antigen biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2655/3167] PWY-8196
<i>Salmonella enterica</i> serotype O:3,10 O antigen biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[2656/3167] PWY-8197
<i>Salmonella enterica</i> serotype O:9,46 O antigen biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2657/3167] PWY-8198
<i>Salmonella enterica</i> serotype O:2 O antigen biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2658/3167] PWY-8199
<i>Salmonella enterica</i> serotype O:9,46,27 O antigen biosynthesis
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[2659/3167] PWY-82
UDP-β-L-arabinose biosynthesis II (from β-L-arabinose)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

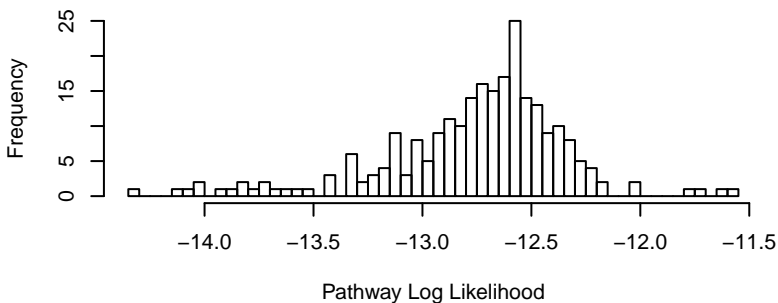
[2660/3167] PWY-8200
backdoor pathway of androgen biosynthesis
(8 Reactions)

Missing 3 Reaction(s) from Pathway.

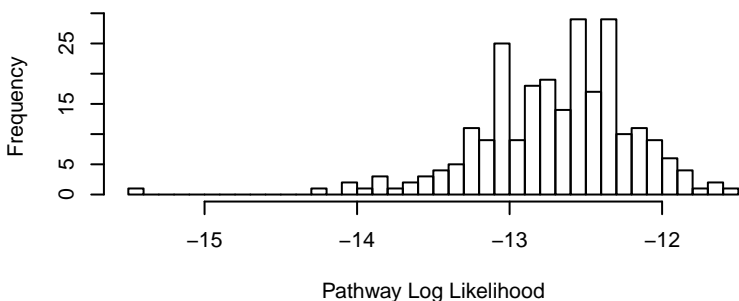
[2661/3167] PWY-8202
11-oxyandrogens biosynthesis
(8 Reactions)

Missing 4 Reaction(s) from Pathway.

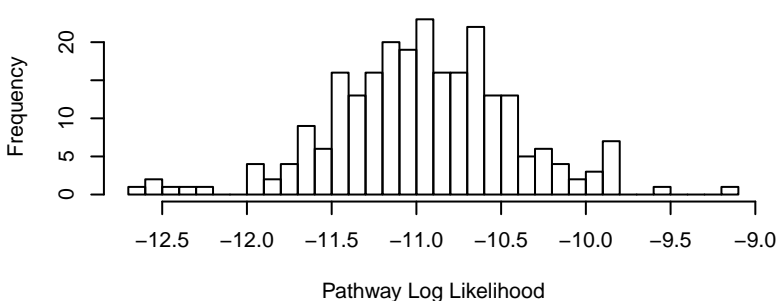
[2662/3167] PWY-8203
8-amino-7-oxononanoate biosynthesis IV
(4 Reactions)



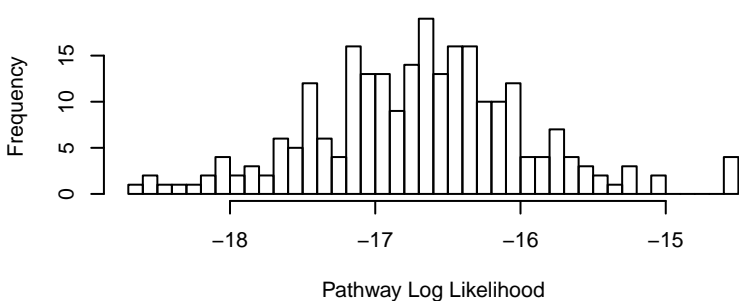
[2663/3167] PWY-8204
<i>Salmonella enterica</i> serotype O:54 O antigen biosynthesis
(4 Reactions)



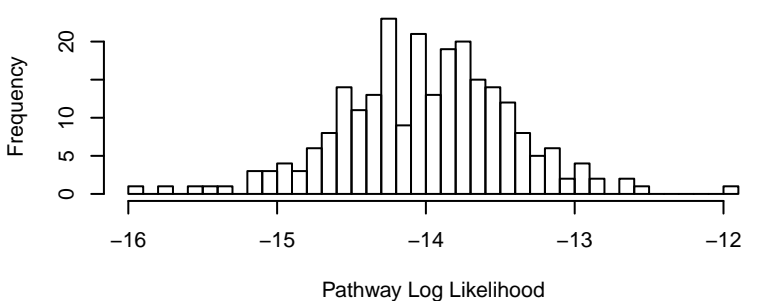
[2664/3167] PWY-8205
Escherichia coli serotype O:77/ <i>Salmonella enterica</i> serotype O:6,14 O antigen biosynthesis
(3 Reactions)



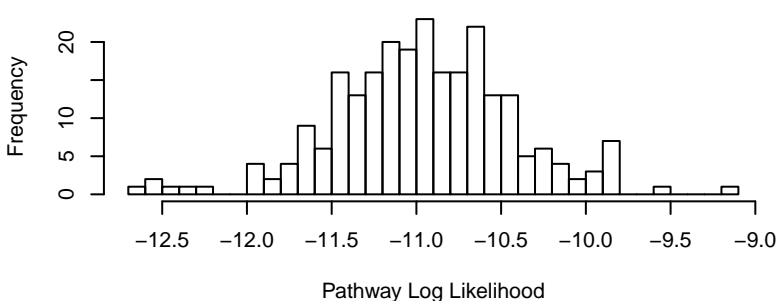
[2665/3167] PWY-8206
<i>Salmonella enterica</i> serotype O:18 O antigen biosynthesis
(4 Reactions)



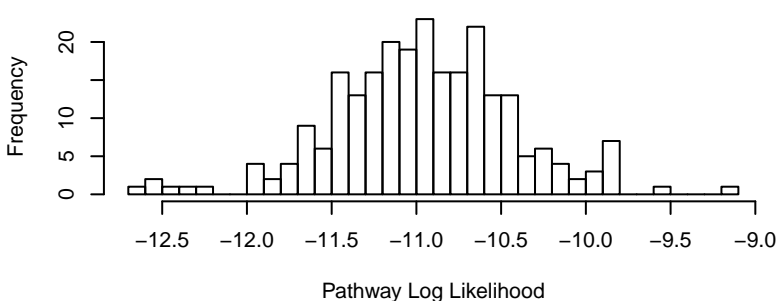
[2666/3167] PWY-8207
•*Escherichia coli* serotype O:85/ <i>Salmonella enterica</i> serotype O:17 O antigen biosynthesis
(4 Reactions)



[2667/3167] PWY-8208
<i>Salmonella enterica</i> serotype O:6,7 O antigen biosynthesis
(3 Reactions)



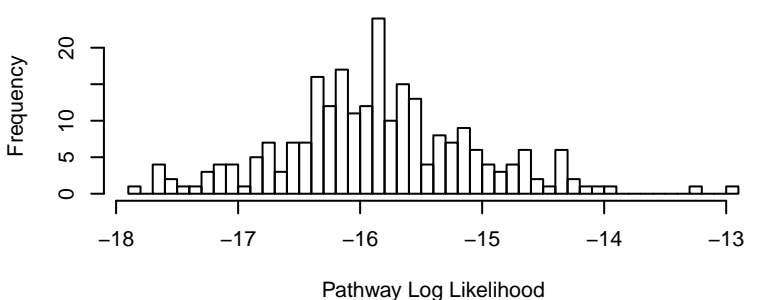
[2668/3167] PWY-8209
<i>Escherichia coli</i> serotype O:15 O antigen biosynthesis
(3 Reactions)



[2669/3167] PWY-8210
pyrrolomycin biosynthesis
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

[2670/3167] PWY-8211
<i>Escherichia coli</i> serotype O:7 O antigen biosynthesis
(4 Reactions)



[2671/3167] PWY-8212
<i>Escherichia coli</i> serotype O:8 O antigen biosynthesis
(6 Reactions)

Missing 3 Reaction(s) from Pathway.

[2672/3167] PWY-8213
sulfoquinovose degradation III
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2673/3167] PWY-8214
3-sulfopropanediol degradation II
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2674/3167] PWY-8215
3-sulfopropanediol degradation III
(1 Reactions)

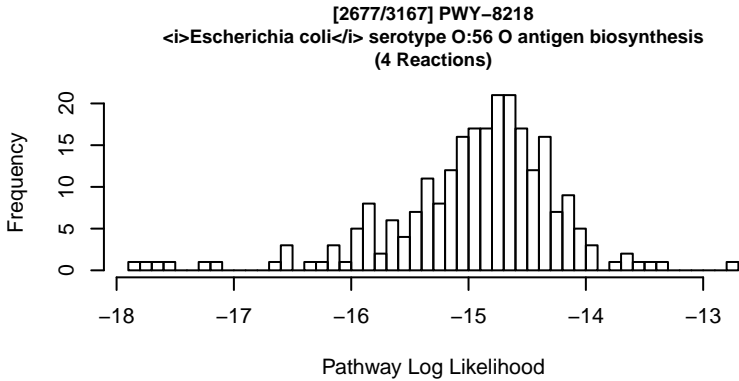
Missing ALL Reaction(s) from Pathway.

[2675/3167] PWY-8216
strychnine biosynthesis
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[2676/3167] PWY-8217
•*Escherichia coli* serotype O:55/•*Salmonella enterica* serotype O:50 O antigen biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.



[2678/3167] PWY-8219
<i>Escherichia coli</i> serotype O:107 O antigen biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

[2679/3167] PWY-822
fructan biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

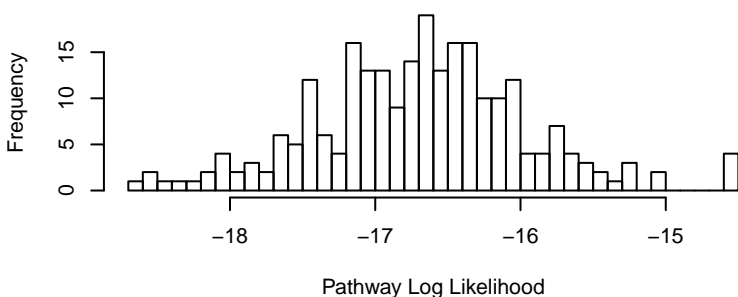
[2680/3167] PWY-8220
<i>Escherichia coli</i> serotype O:117 O antigen biosynthesis
(5 Reactions)

Missing 1 Reaction(s) from Pathway.

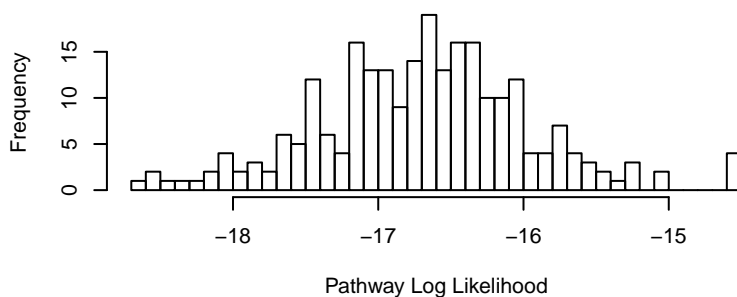
[2681/3167] PWY-8221
Escherichia coli serotype O:111/*Salmonella enterica* serotype O:35 O antigen biosynthesis (4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2683/3167] PWY-8224
Escherichia coli serotype O:157/*Salmonella enterica* serotype O:30 O antigen biosynthesis (4 Reactions)



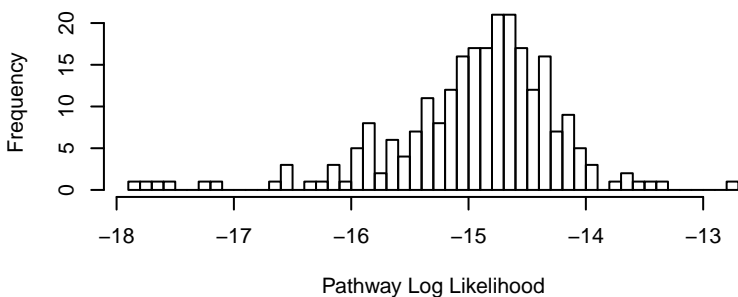
[2682/3167] PWY-8222
Escherichia coli serotype O:128 O antigen biosynthesis (4 Reactions)



[2684/3167] PWY-8225
GDP-N-acetyl- α -D-perosamine biosynthesis (3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

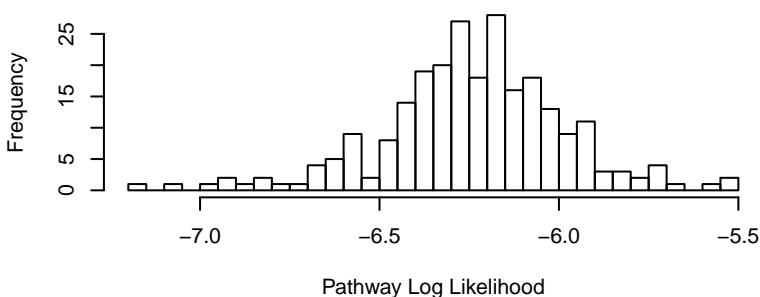
[2685/3167] PWY-8226
Escherichia coli serotype O:152 O antigen biosynthesis (4 Reactions)



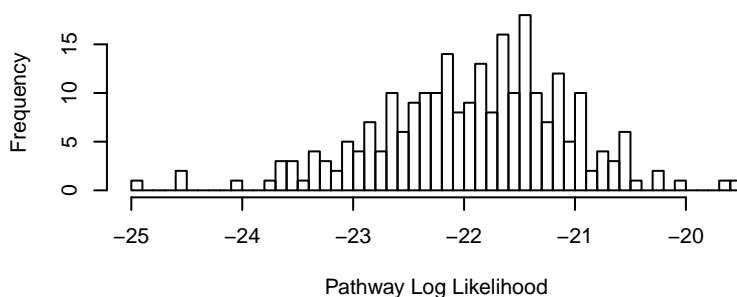
[2686/3167] PWY-8228
Porphyromonas gingivalis O-LPS antigen biosynthesis (4 Reactions)

Missing 1 Reaction(s) from Pathway.

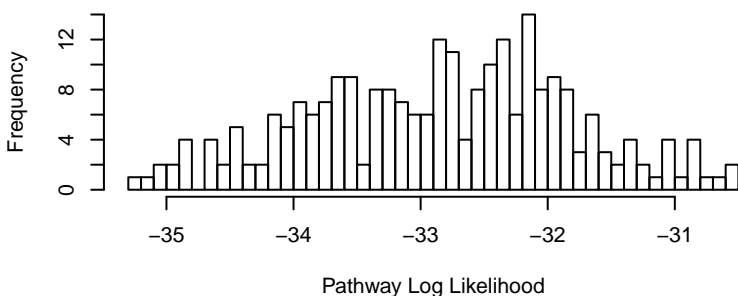
[2687/3167] PWY-8229
UDP-3-acetamido-2,3-dideoxy-2-(seryl)amino- α -D-glucuronamide biosynthesis (2 Reactions)



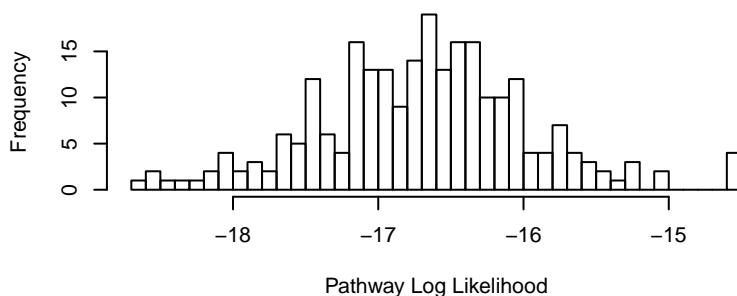
[2688/3167] PWY-8230
Salmonella enterica serotype O:13 O antigen biosynthesis (5 Reactions)

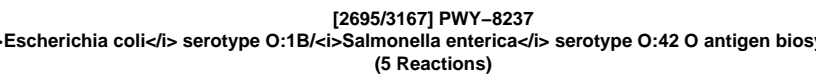
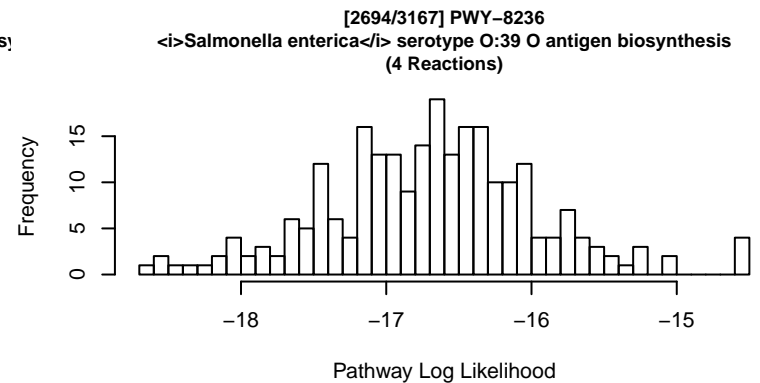
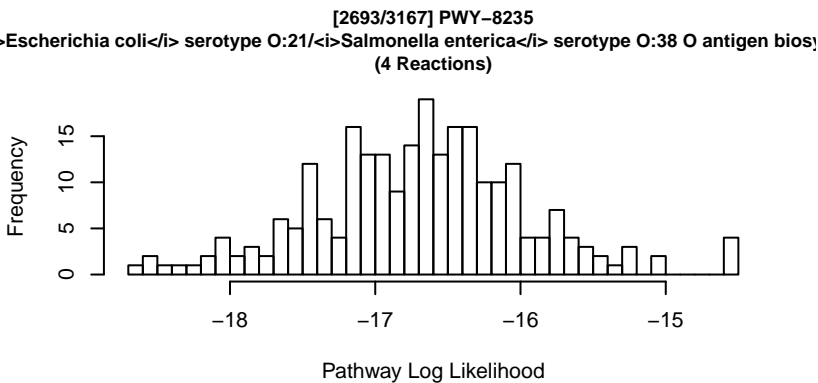
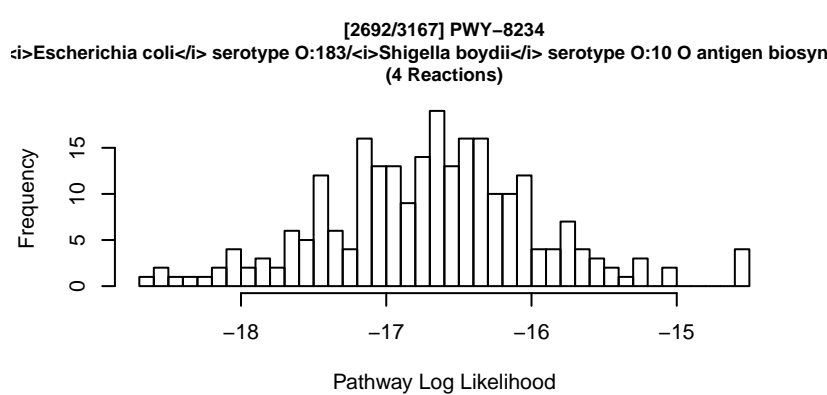
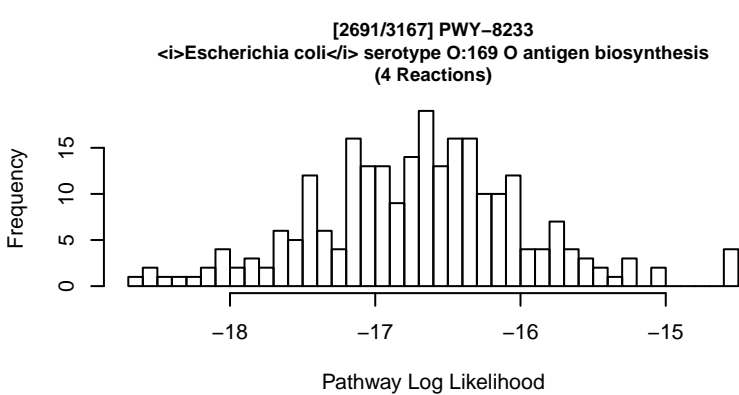


[2689/3167] PWY-8231
Escherichia coli serotype O:127 O antigen biosynthesis (7 Reactions)

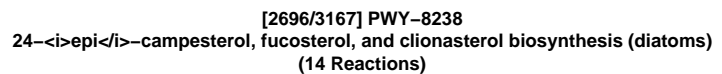


[2690/3167] PWY-8232
Shigella boydii serotype 6 O antigen biosynthesis (4 Reactions)

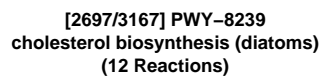




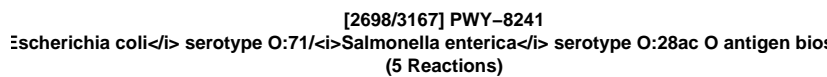
Missing 1 Reaction(s) from Pathway.



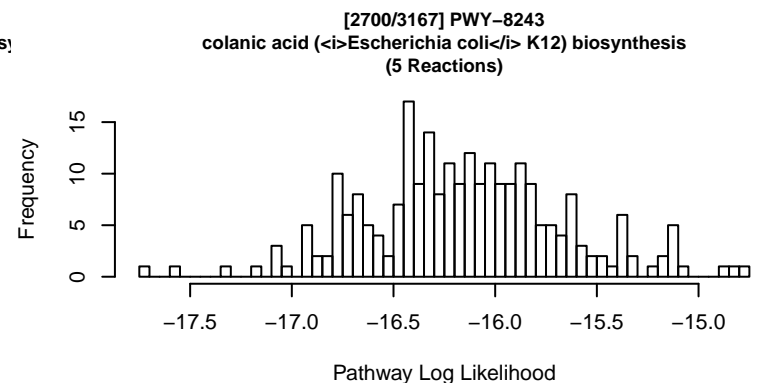
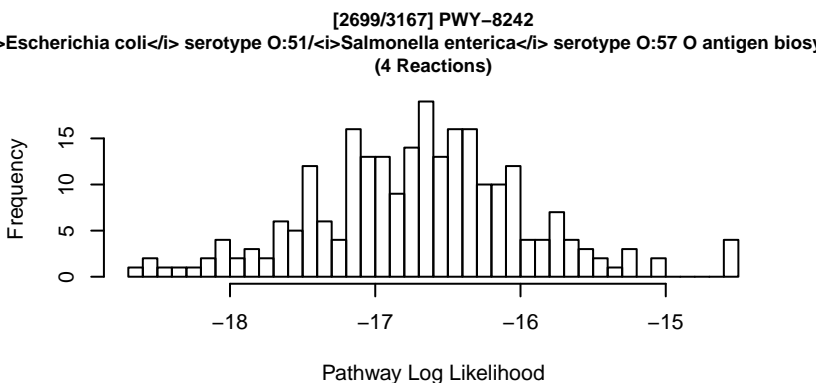
Missing 12 Reaction(s) from Pathway.

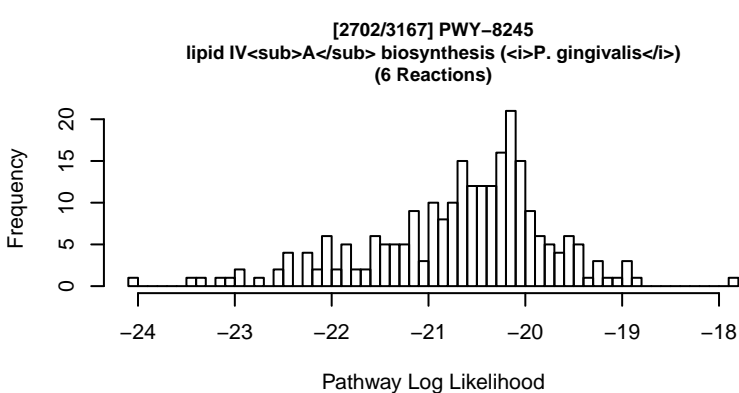
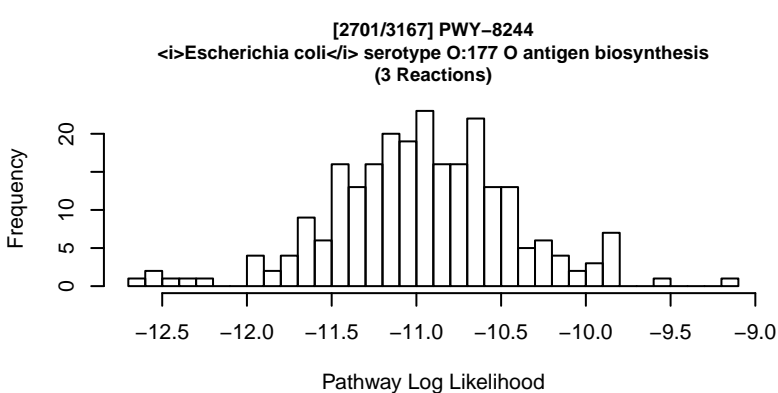


Missing 11 Reaction(s) from Pathway.



Missing 1 Reaction(s) from Pathway.



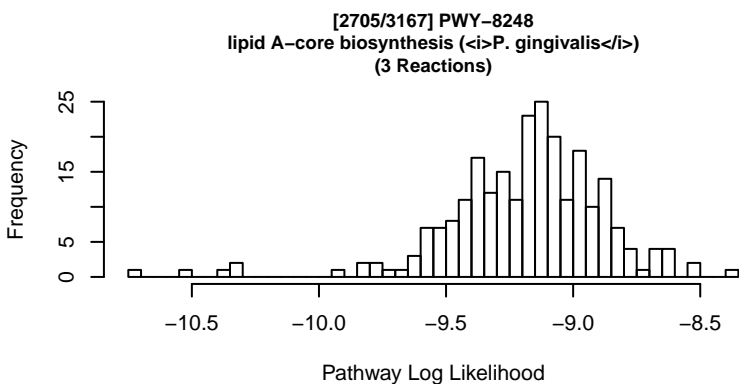


[2703/3167] PWY-8246
Kdo transfer to lipid IV_A (*P. gingivalis*)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2704/3167] PWY-8247
(Kdo)₂-lipid A biosynthesis (*P. gingivalis*)
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

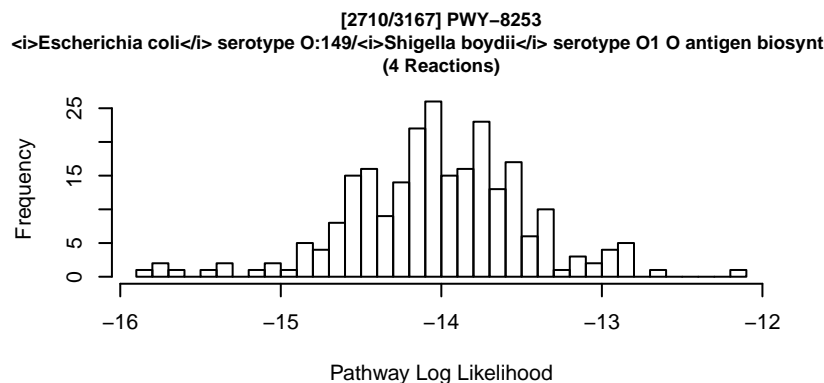
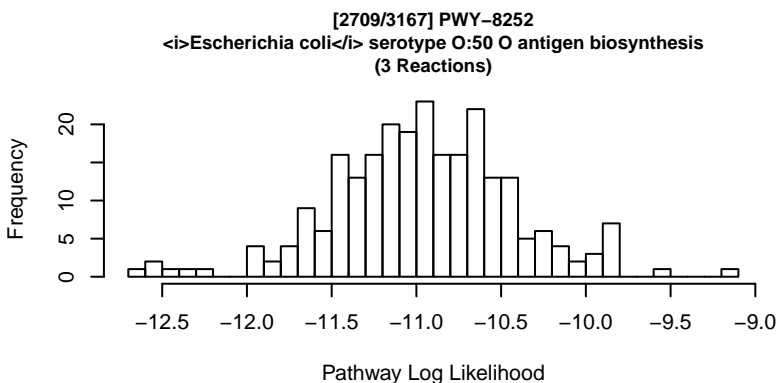
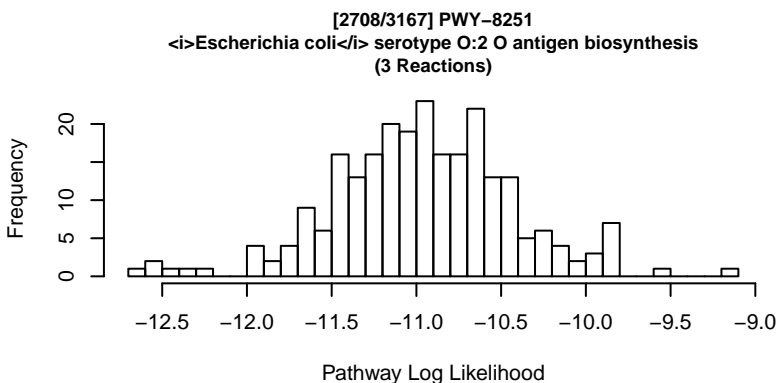


[2706/3167] PWY-8249
xanthommatin biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2707/3167] PWY-8250
Escherichia coli serotype O:9 O antigen biosynthesis
(7 Reactions)

Missing 3 Reaction(s) from Pathway.



[2711/3167] PWY-8254
bile acids 7-O epimerization
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2712/3167] PWY-8255
bile acids 3-O-epimerization
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2713/3167] PWY-8256
bile acids 12-O-epimerization
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2714/3167] PWY-8257
<i>Escherichia coli</i> serotype O:52 O antigen biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2715/3167] PWY-8259
arsenic detoxification (plants)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2716/3167] PWY-8260
roxarsone degradation I
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2717/3167] PWY-8261
roxarsone degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

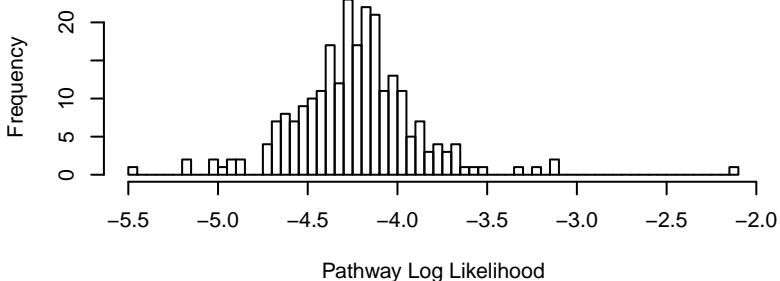
[2718/3167] PWY-8262
roxarsone (and nitarson) degradation III
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2719/3167] PWY-8263
arsenate detoxification III
(1 Reactions)

[2720/3167] PWY-8264
arsenate detoxification I
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[2721/3167] PWY-8265
roxarsone (and nitarsones) degradation IV
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2722/3167] PWY-8268
methylarsonous acid detoxification II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2723/3167] PWY-8269
methylarsonous acid detoxification III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

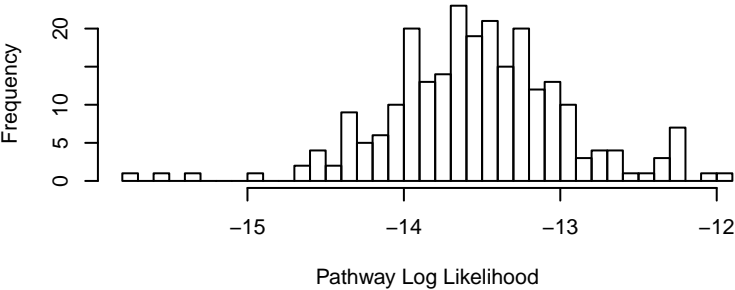
[2724/3167] PWY-8270
cyclic electron flow
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2725/3167] PWY-8271
NADPH to cytochrome *c* oxidase via plastocyanin
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

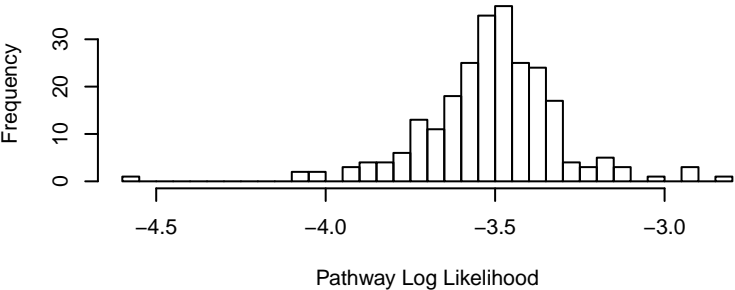
[2726/3167] PWY-8272
Escherichia coli serotype O:49 O antigen biosynthesis
(4 Reactions)



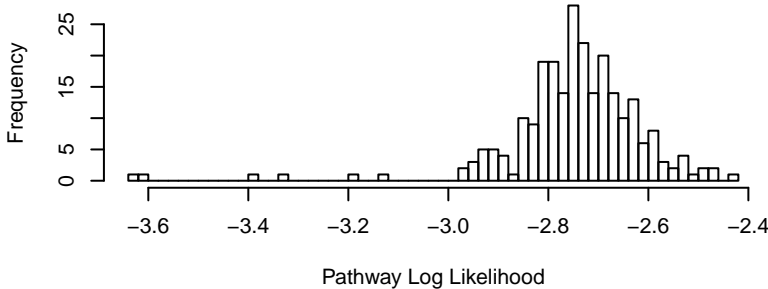
[2727/3167] PWY-8273
UDP-3-acetamido-2-amino-2,3-dideoxy- α -D-glucopyranose biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

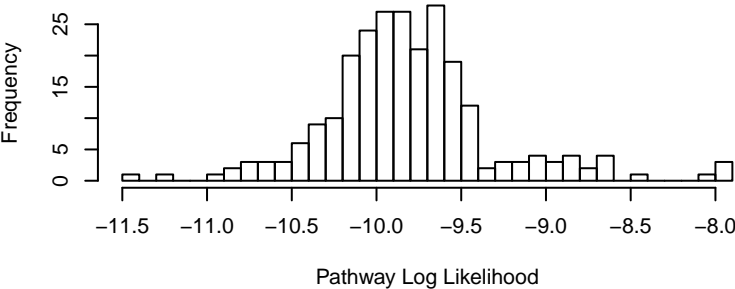
[2728/3167] PWY-8274
pyruvate fermentation to *R*-lactate
(1 Reactions)



[2729/3167] PWY-8275
pyruvate decarboxylation to acetyl CoA III
(1 Reactions)



[2730/3167] PWY-8276
4-aminobenzoate biosynthesis II
(2 Reactions)

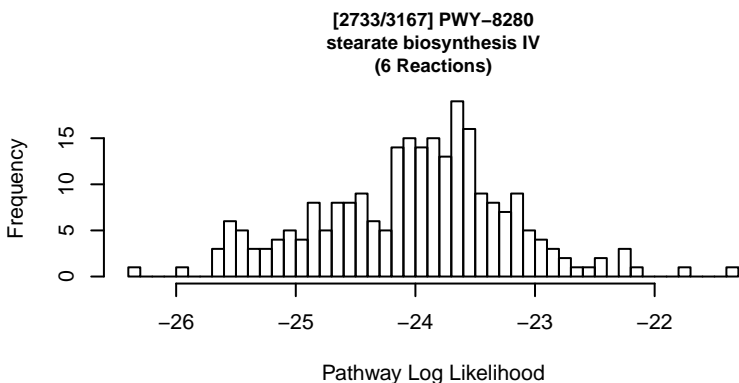


[2731/3167] PWY-8277
NAD <i>de novo</i> biosynthesis IV (anaerobic)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[2732/3167] PWY-8279
palmitate biosynthesis III
(8 Reactions)

Zeros/-Inf for reaction(s) in Pathway



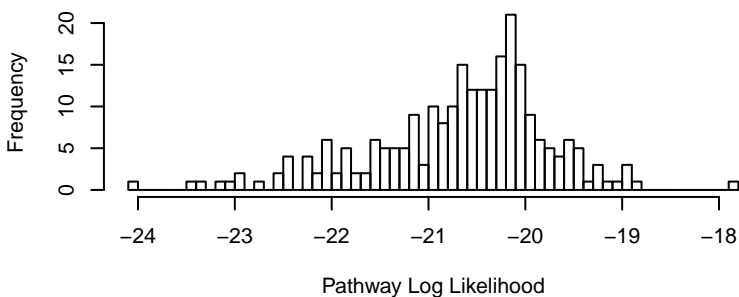
[2734/3167] PWY-8281
4-aminobenzoate biosynthesis III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2735/3167] PWY-8282
adenosylcobinamide-GDP salvage from assorted adenosylcobamides
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

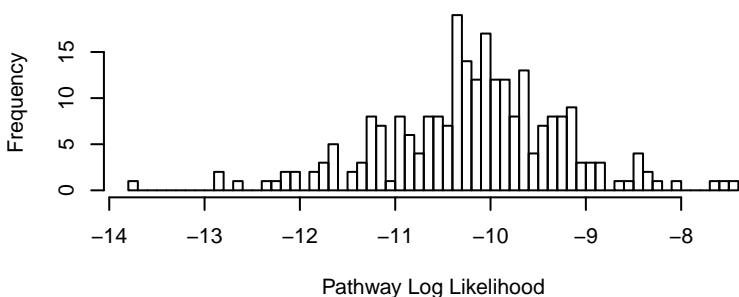
[2736/3167] PWY-8283
lipid IV_A biosynthesis (generic)
(6 Reactions)



[2737/3167] PWY-8284
Kdo transfer to lipid IV_A (generic)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2738/3167] PWY-8285
(Kdo)₂-lipid A biosynthesis (generic)
(2 Reactions)



[2739/3167] PWY-8286
carbofuran degradation I
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2740/3167] PWY-8287
carbofuran degradation II
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

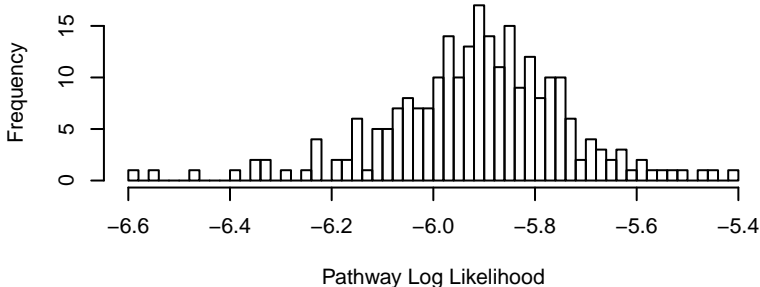
[2741/3167] PWY-8288
carbofuran degradation III
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2742/3167] PWY-8289
dZTP biosynthesis
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[2743/3167] PWY-8291
L-aspartate degradation II (aerobic)
(2 Reactions)



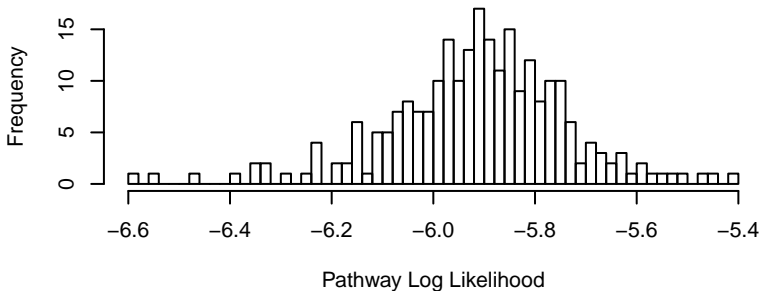
[2744/3167] PWY-8292
trimethylamine <i>N</i>-oxide biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2745/3167] PWY-8293
alazopeptin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2746/3167] PWY-8294
L-aspartate degradation II (anaerobic)
(2 Reactions)



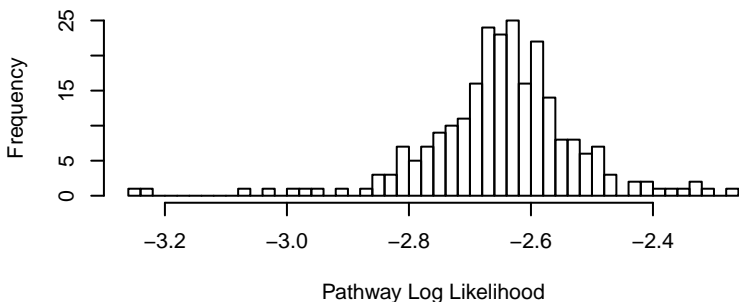
[2747/3167] PWY-8295
nitrite biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2748/3167] PWY-8296
cremeomycin biosynthesis
(7 Reactions)

Missing 4 Reaction(s) from Pathway.

[2749/3167] PWY-8297
6-diazo-5-oxo-L-norleucine biosynthesis
(1 Reactions)



[2750/3167] PWY-8298
streptozotocin biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2751/3167] PWY-8299
L-piperazate biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2752/3167] PWY-83
monolignol glucosides biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2753/3167] PWY-8301
<i>S</i>-(6-hydroxy-4-methylhexan-4-yl)-L-cysteinylglycine biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2754/3167] PWY-8302
<i>S</i>-(6-hydroxy-4-methylhexan-4-yl)-L-cysteinylglycine degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2755/3167] PWY-8303
reductive glycine pathway
(10 Reactions)

Missing 1 Reaction(s) from Pathway.

[2756/3167] PWY-8304
methanogenesis from methoxylated aromatic compounds
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2757/3167] PWY-8305
methoxylated aromatic compound degradation II
(9 Reactions)

Missing 3 Reaction(s) from Pathway.

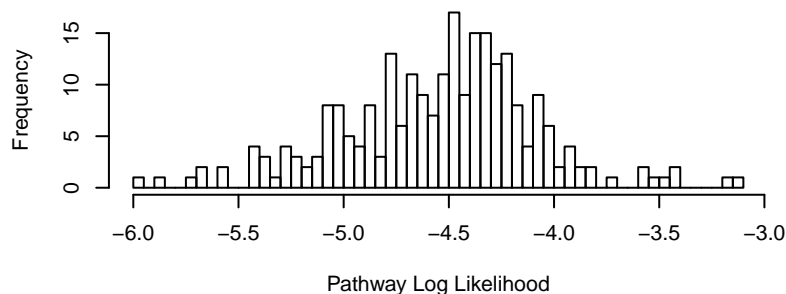
[2758/3167] PWY-8306
methoxylated aromatic compound degradation I
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2759/3167] PWY-8307
L-carnitine degradation III
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

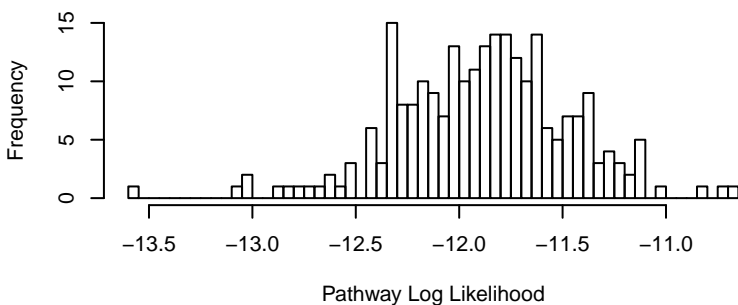
[2760/3167] PWY-8308
thiazole component of thiamine diphosphate biosynthesis IV
(1 Reactions)



[2761/3167] PWY-84
resveratrol biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

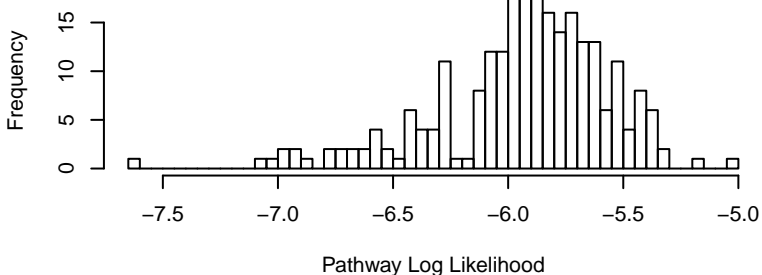
[2762/3167] PWY-842
starch degradation I
(3 Reactions)



[2763/3167] PWY-861
dhurrin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2764/3167] PWY-862
fructan degradation
(2 Reactions)



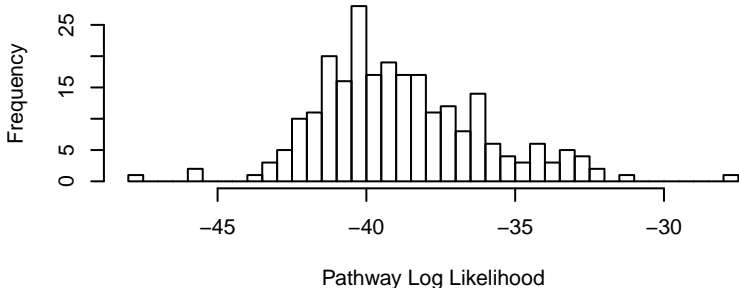
[2765/3167] PWY-881
trehalose biosynthesis II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

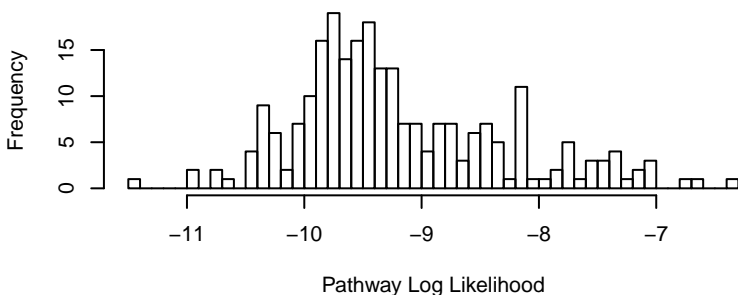
[2766/3167] PWY-882
L-ascorbate biosynthesis I (plants, L-galactose pathway)
(5 Reactions)

Missing 4 Reaction(s) from Pathway.

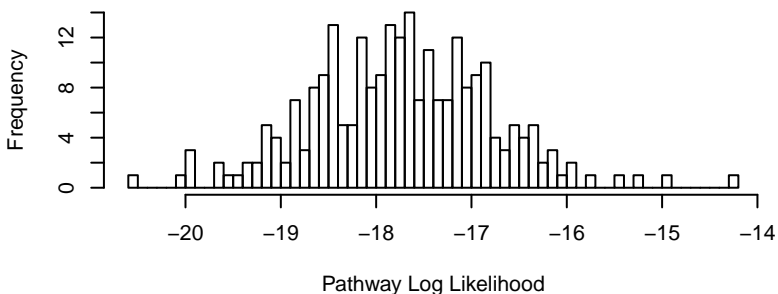
[2767/3167] PWY-922
mevalonate pathway I (eukaryotes and bacteria)
(8 Reactions)



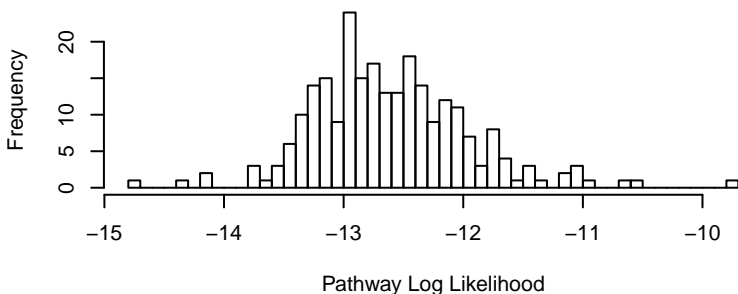
[2768/3167] PWY-981
salicylate biosynthesis II
(2 Reactions)



[2769/3167] PWY-I9
L-cysteine biosynthesis VI (from L-methionine)
(5 Reactions)



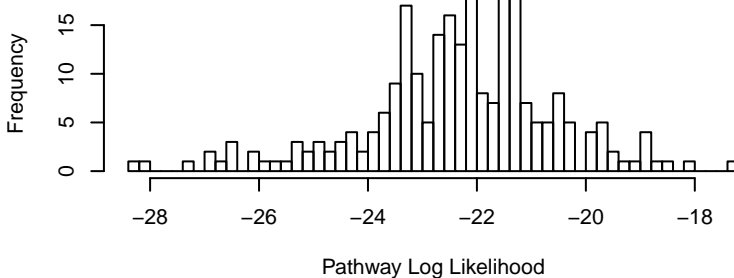
[2770/3167] PWY0-1182
trehalose degradation II (cytosolic)
(3 Reactions)



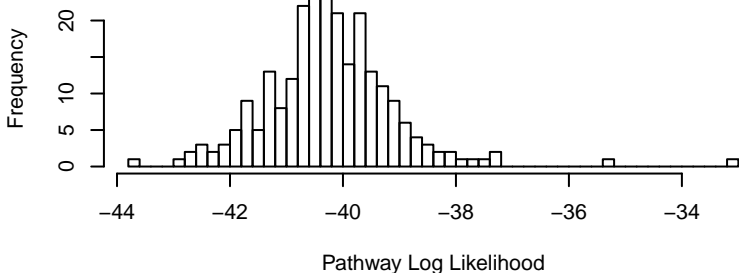
[2771/3167] PWY0-1221
putrescine degradation II
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

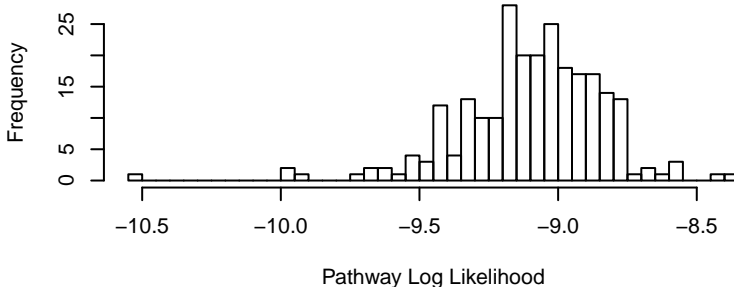
[2772/3167] PWY0-1241
ADP-L- α -glycero- β -D-manno-heptose biosynthesis
(5 Reactions)



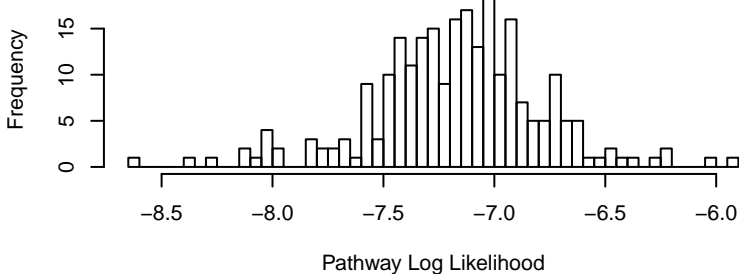
[2773/3167] PWY0-1261
anhydromuropeptides recycling I
(12 Reactions)



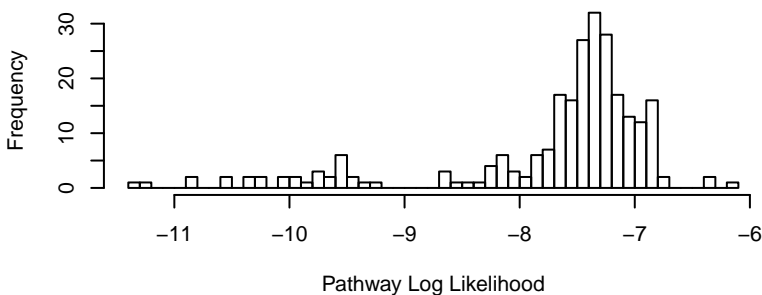
[2774/3167] PWY0-1264
biotin-carboxyl carrier protein assembly
(3 Reactions)



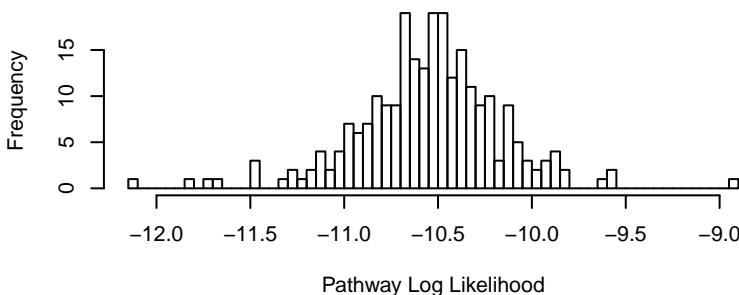
[2775/3167] PWY0-1275
lipoate biosynthesis and incorporation II
(2 Reactions)



[2776/3167] PWY0-1280
ethylene glycol degradation
(2 Reactions)



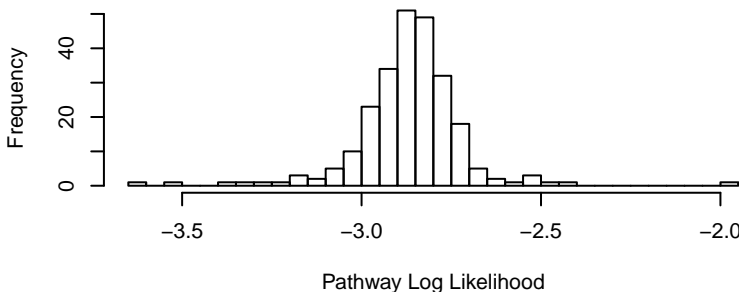
[2777/3167] PWY0-1295
pyrimidine ribonucleosides degradation
(3 Reactions)



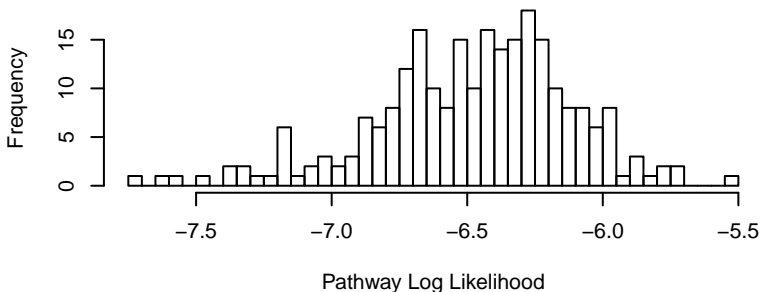
[2778/3167] PWY0-1296
purine ribonucleosides degradation
(4 Reactions)

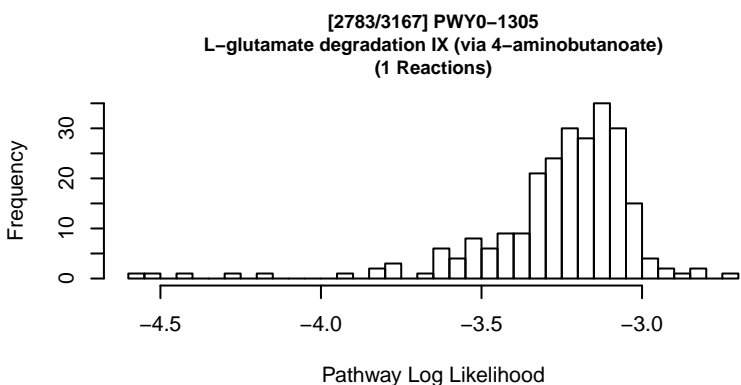
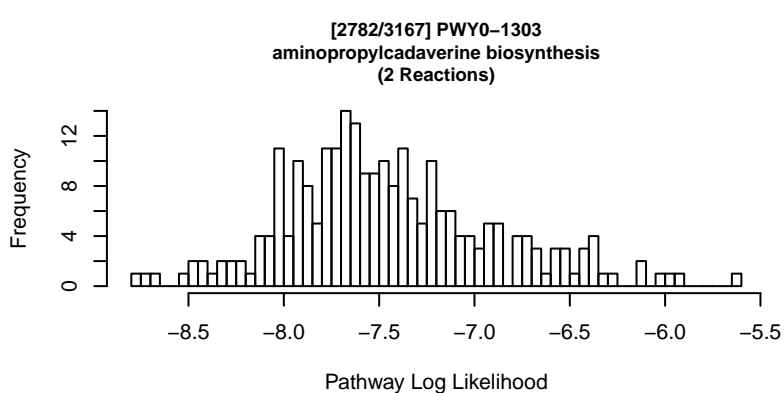
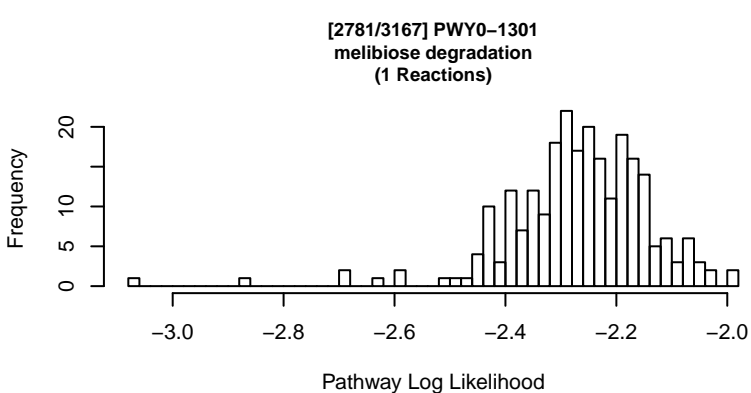
Zeros/-Inf for reaction(s) in Pathway

[2779/3167] PWY0-1299
arginine dependent acid resistance
(1 Reactions)



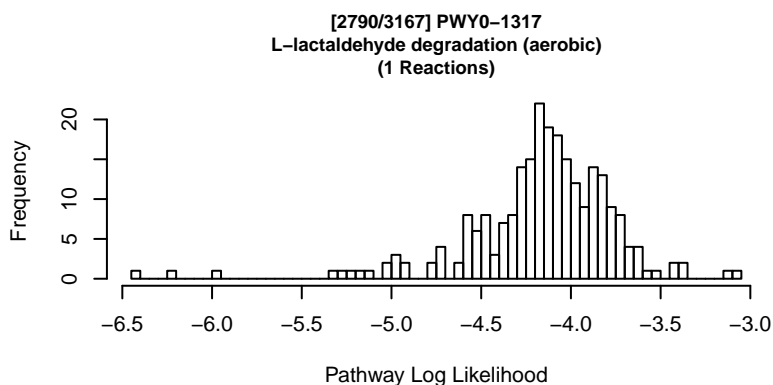
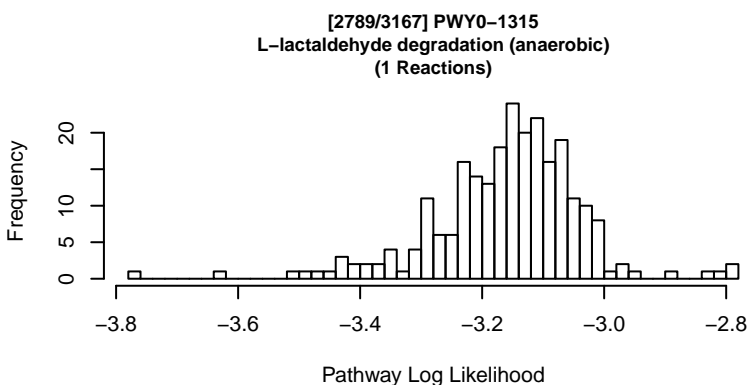
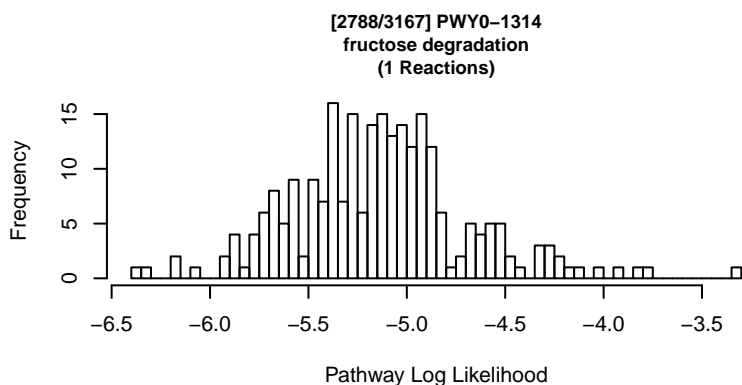
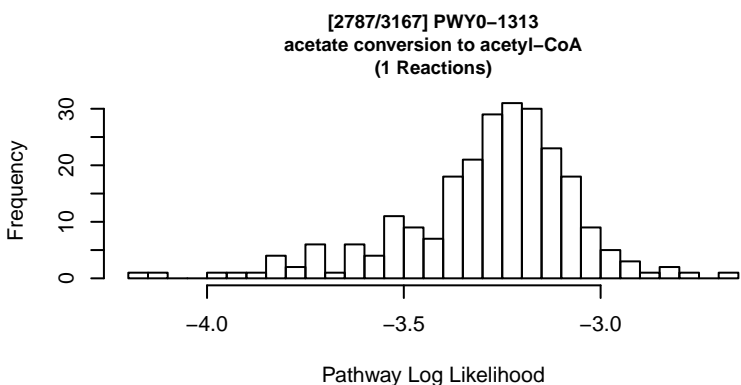
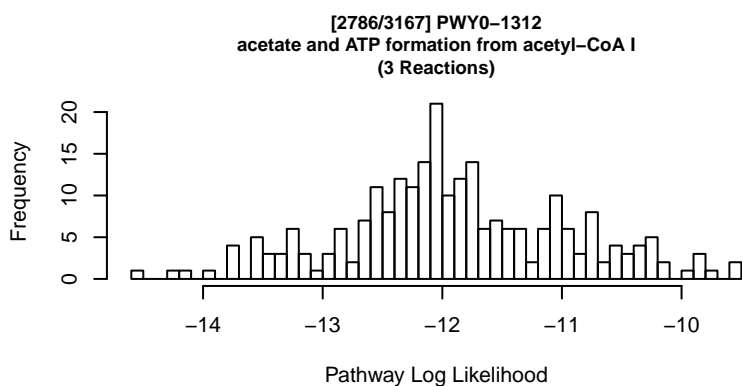
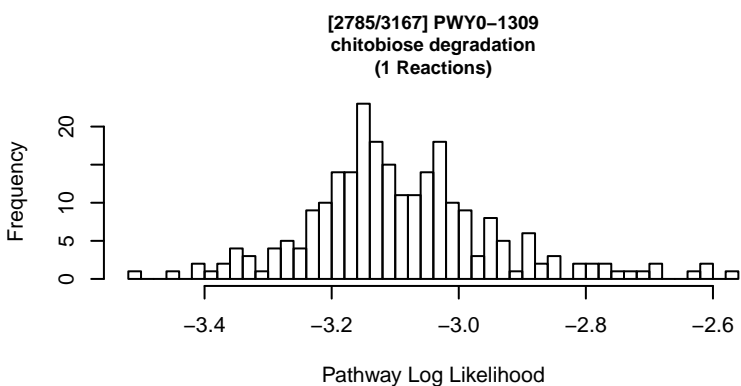
[2780/3167] PWY0-1300
2-O- α -mannosyl-D-glycerate degradation
(2 Reactions)

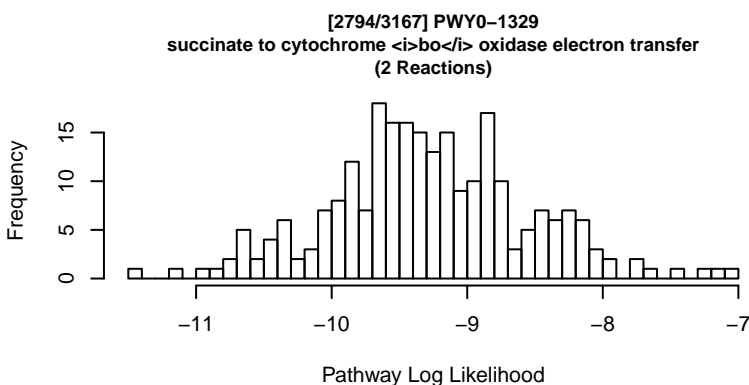
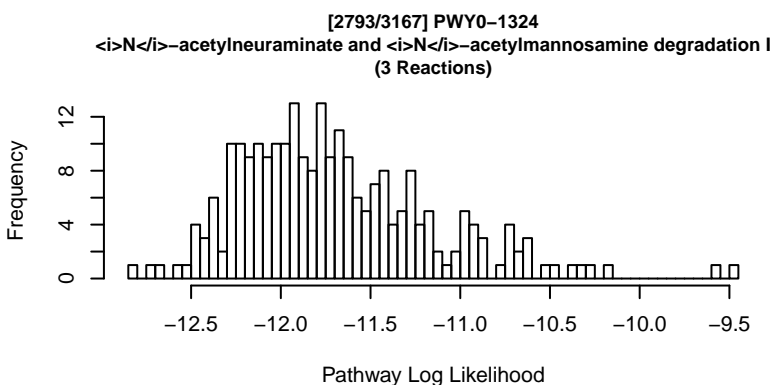
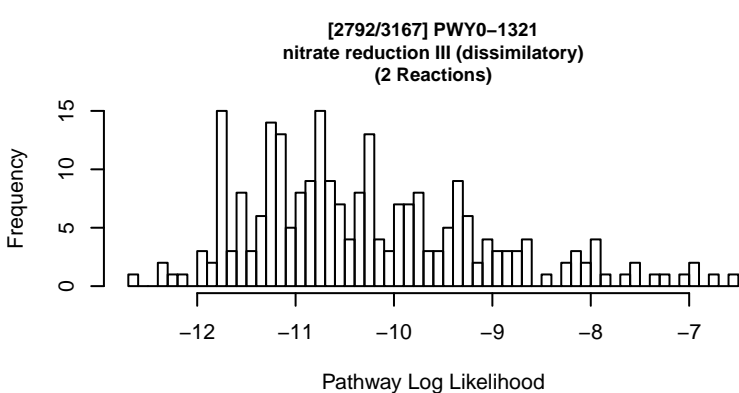
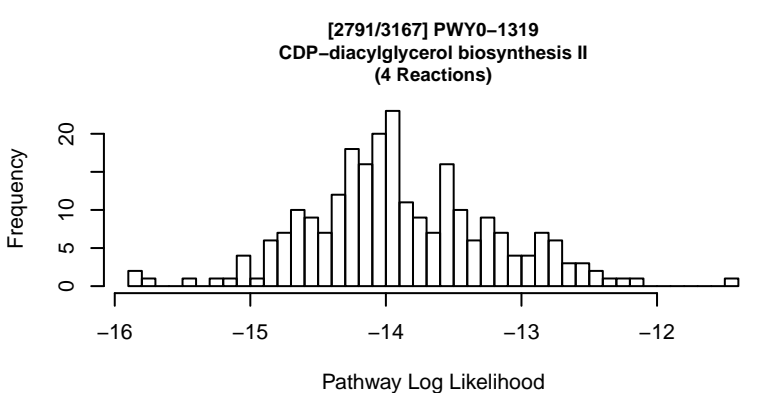




[2784/3167] PWY0-1306
L-galactonate degradation
(1 Reactions)

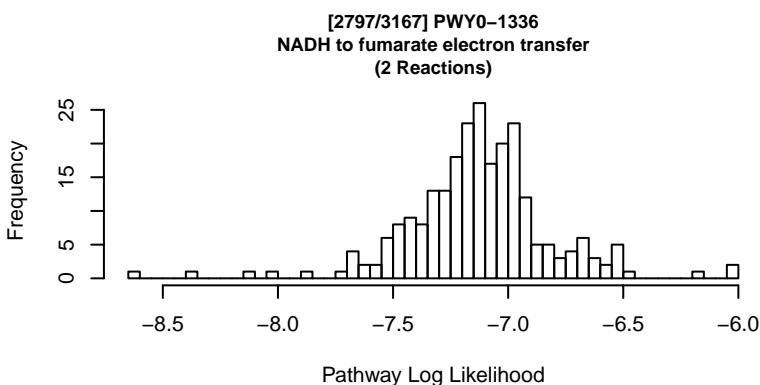
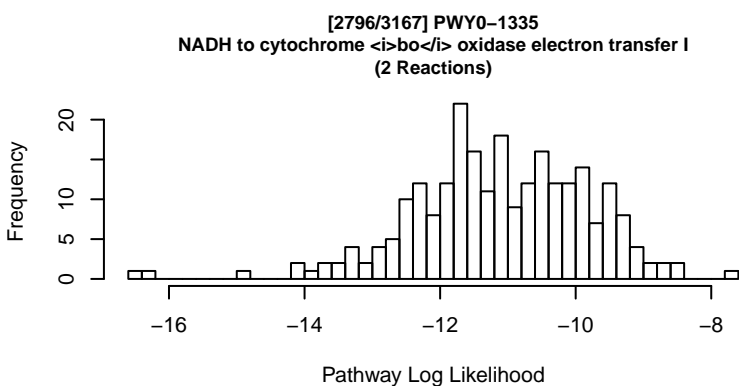
Missing ALL Reaction(s) from Pathway.





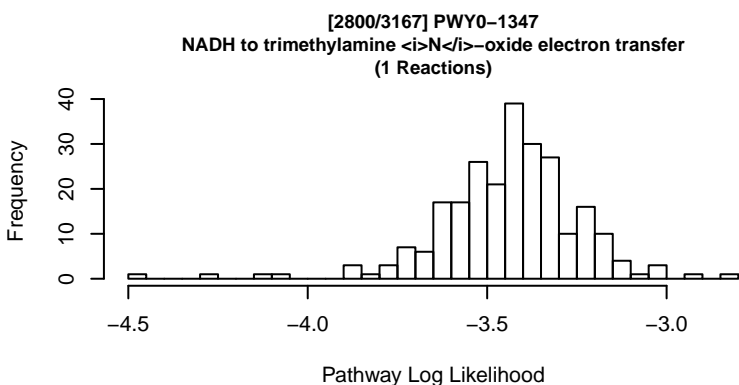
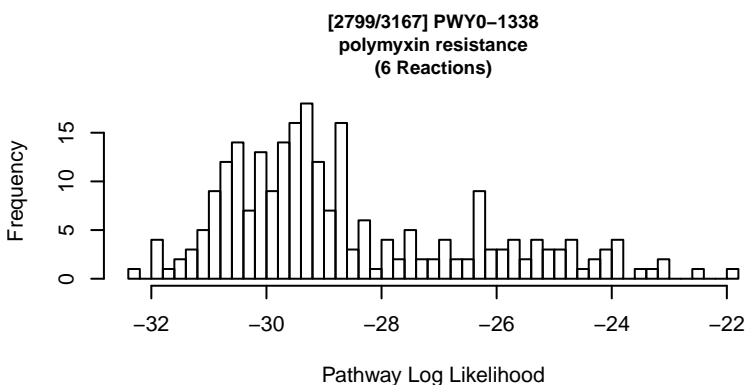
[2795/3167] PWY0-1334
NADH to cytochrome *b*_d oxidase electron transfer I
(2 Reactions)

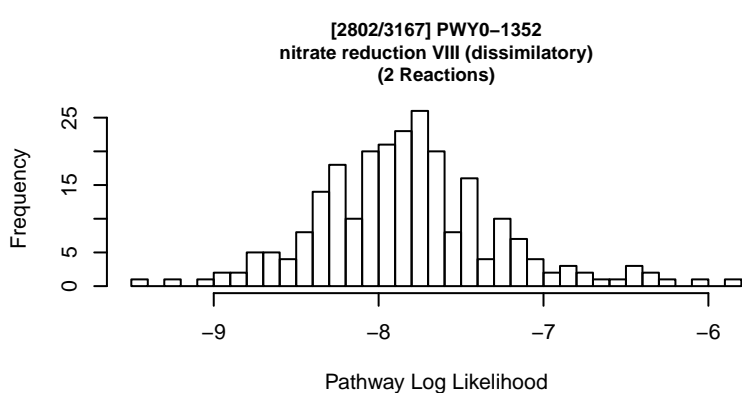
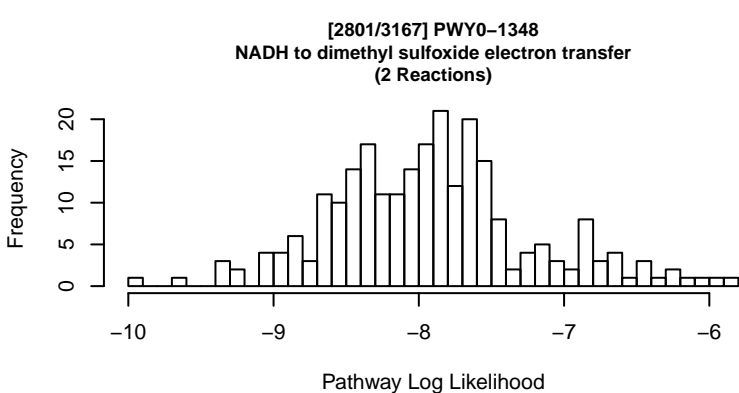
Missing 1 Reaction(s) from Pathway.



[2798/3167] PWY0-1337
oleate β -oxidation
(12 Reactions)

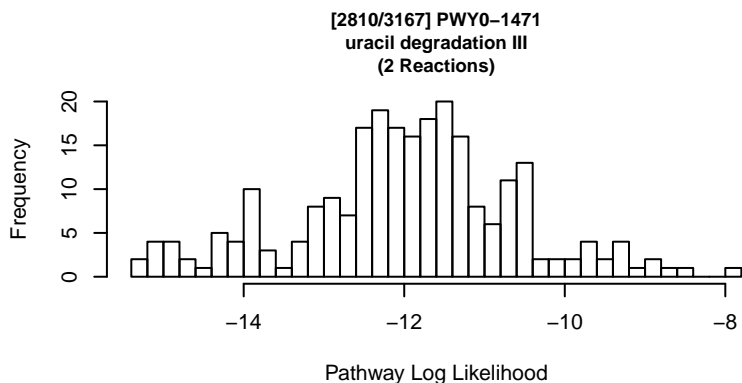
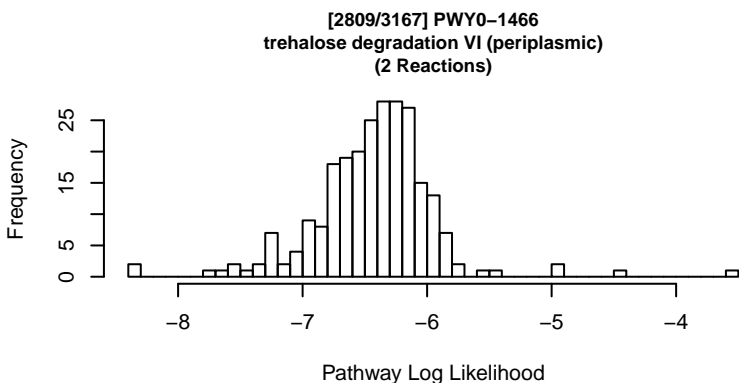
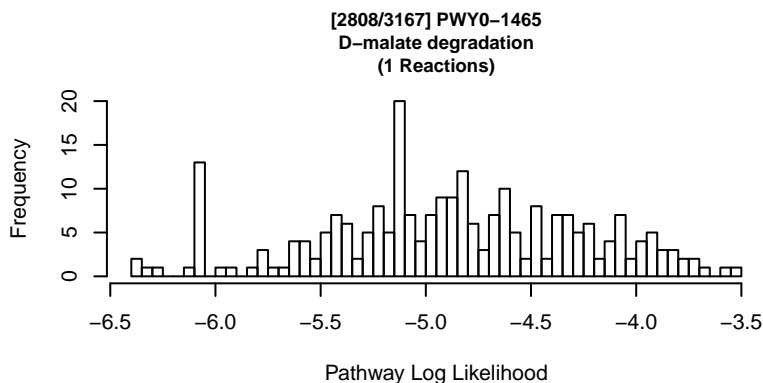
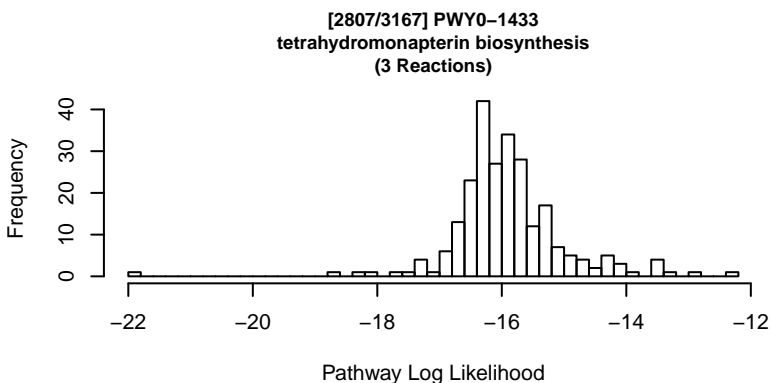
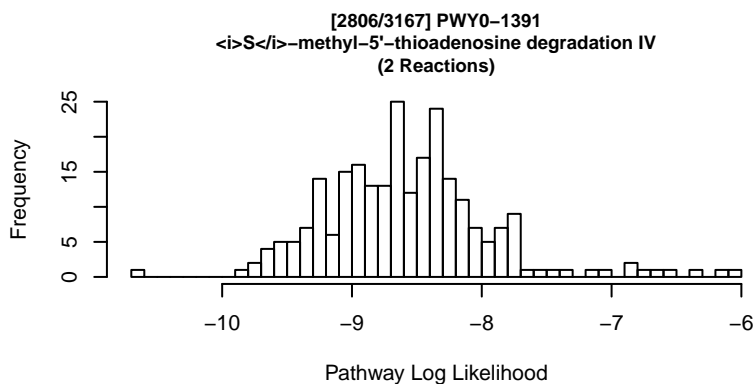
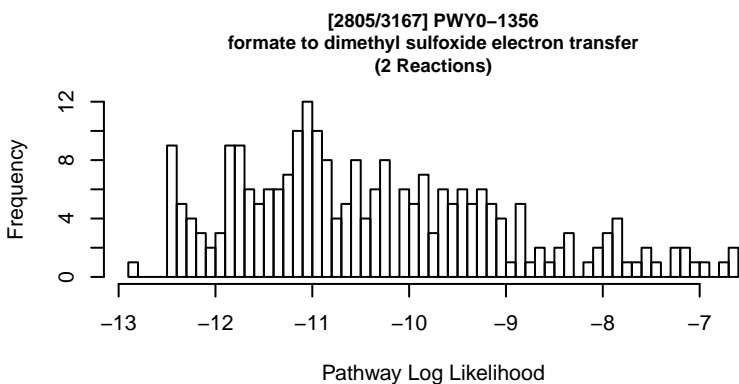
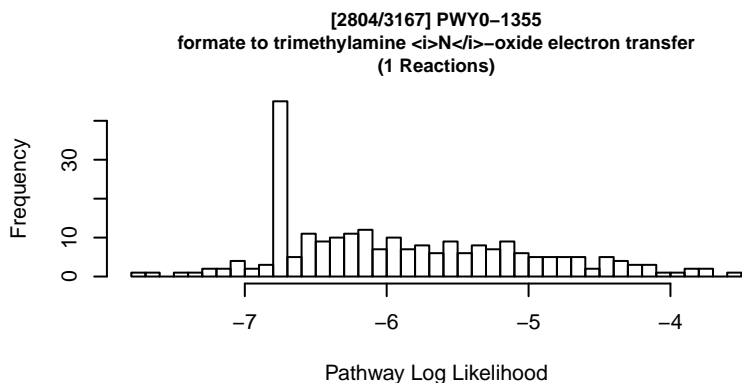
Missing 1 Reaction(s) from Pathway.

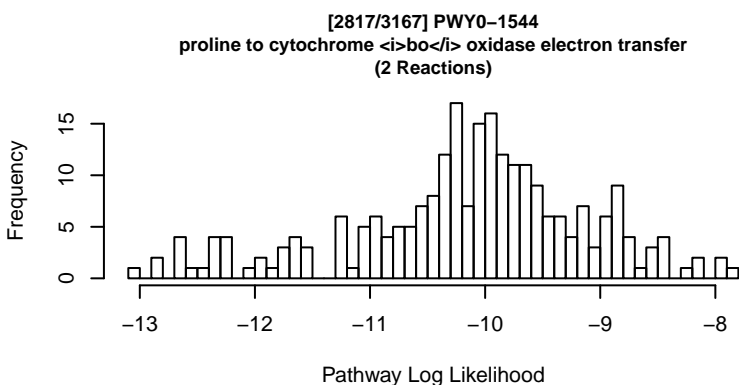
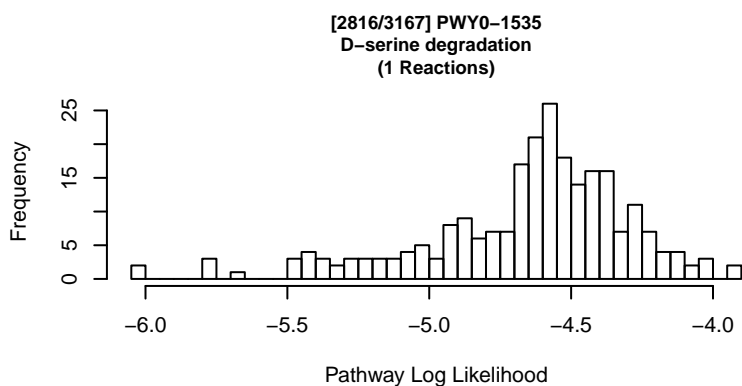
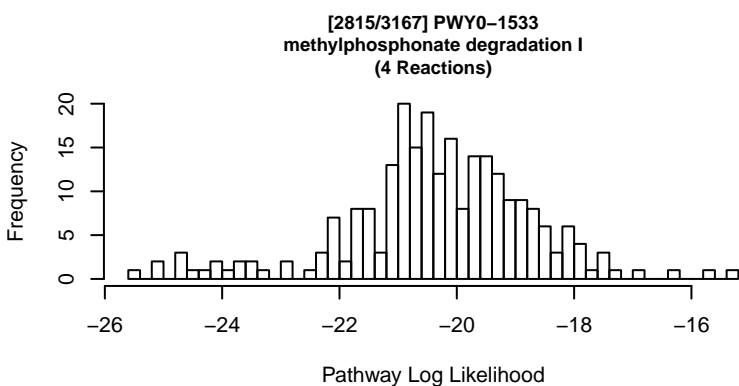
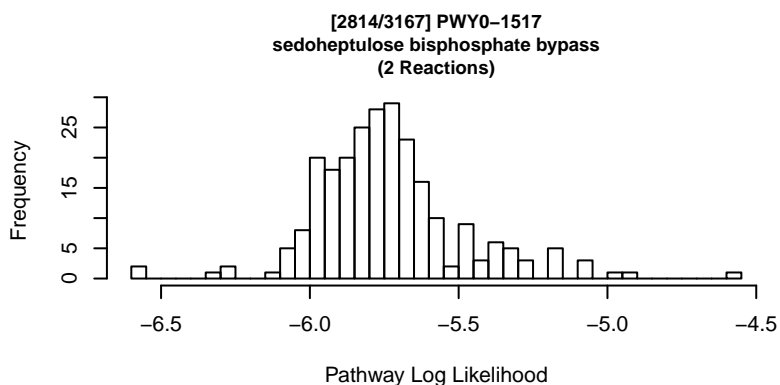
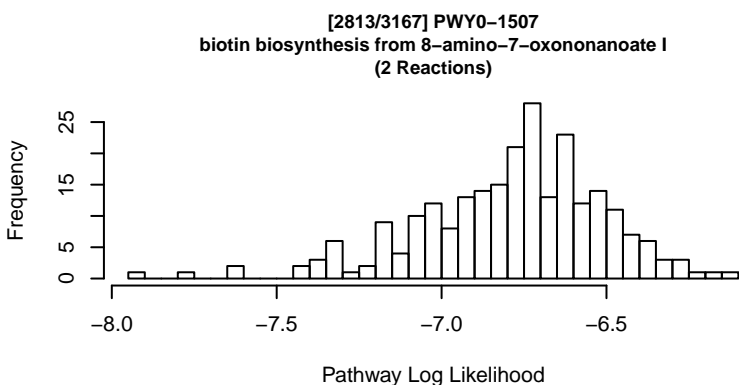
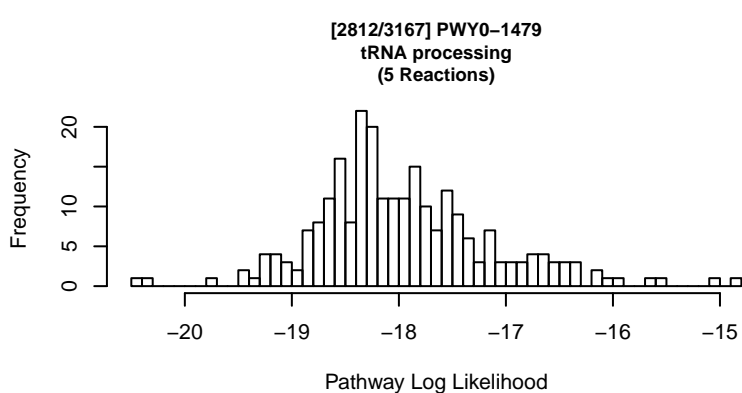
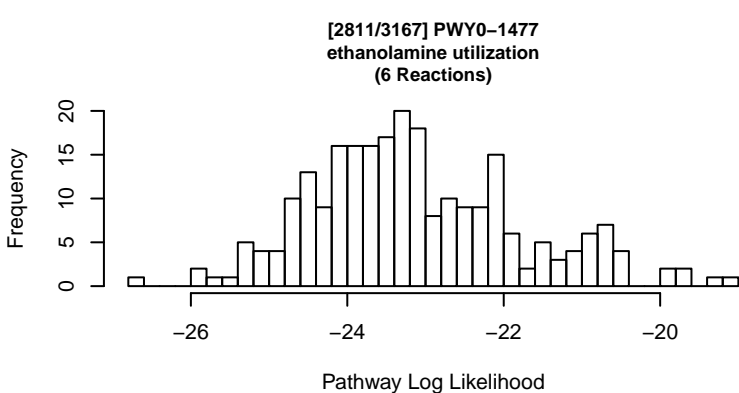




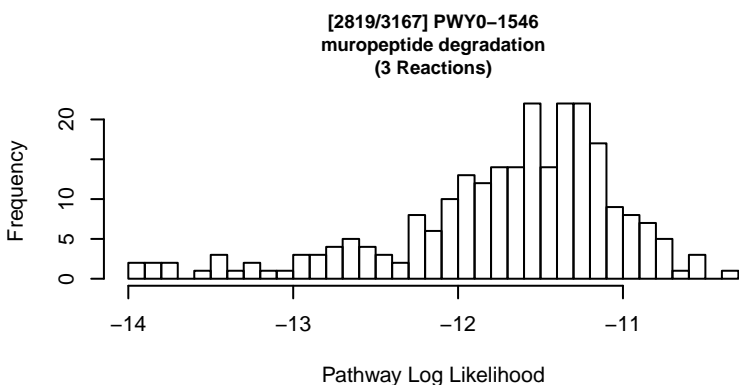
[2803/3167] PWY0-1353
succinate to cytochrome *c* oxidase electron transfer
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



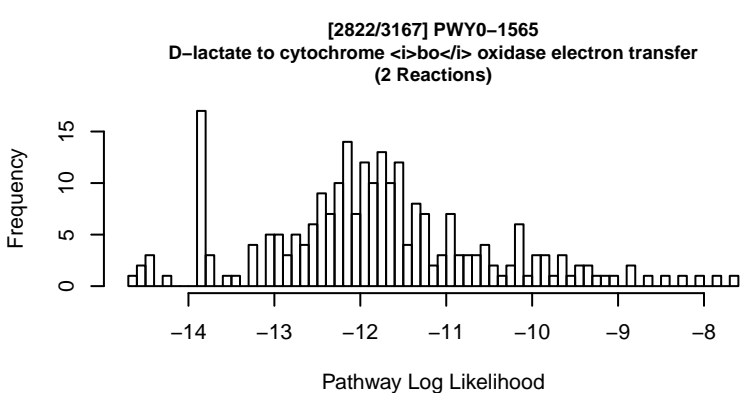
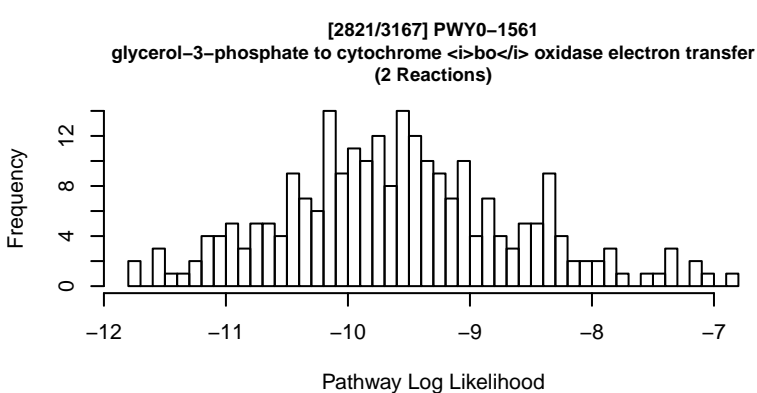


Zeros/-Inf for reaction(s) in Pathway



[2820/3167] PWY0-1554
5-(methoxycarbonylmethoxy)uridine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

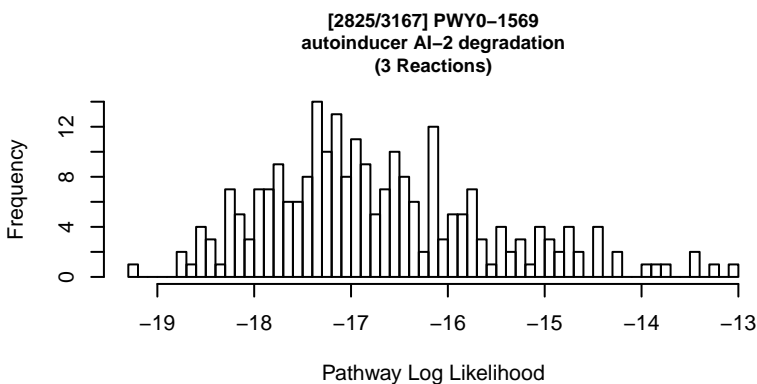


[2823/3167] PWY0-1567
NADH to cytochrome *c*₁ oxidase electron transfer II
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

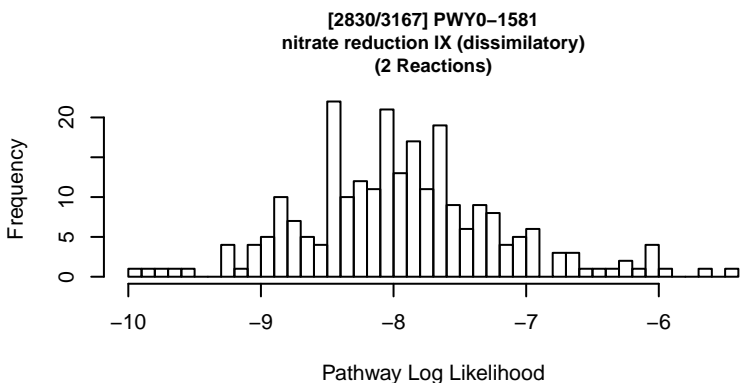
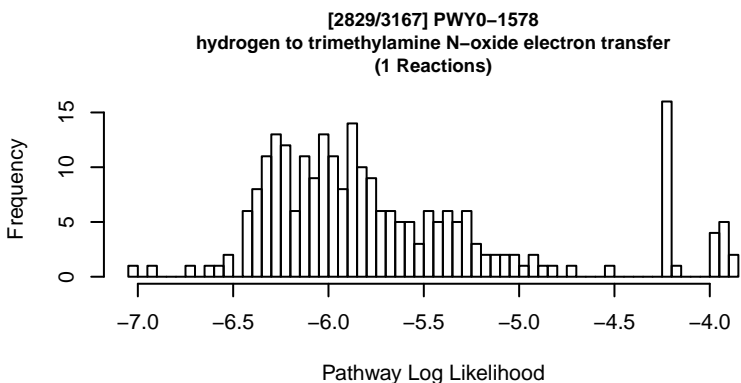
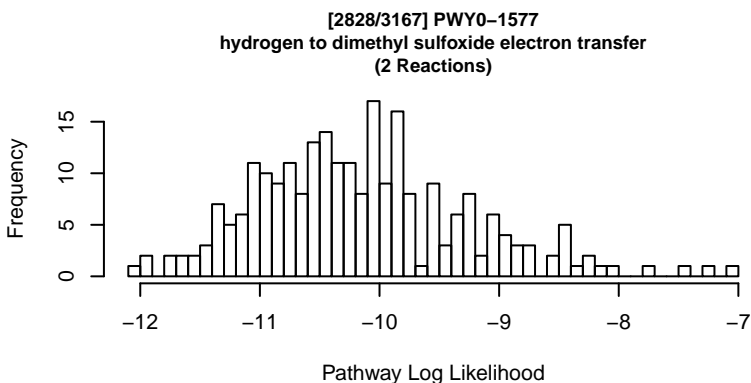
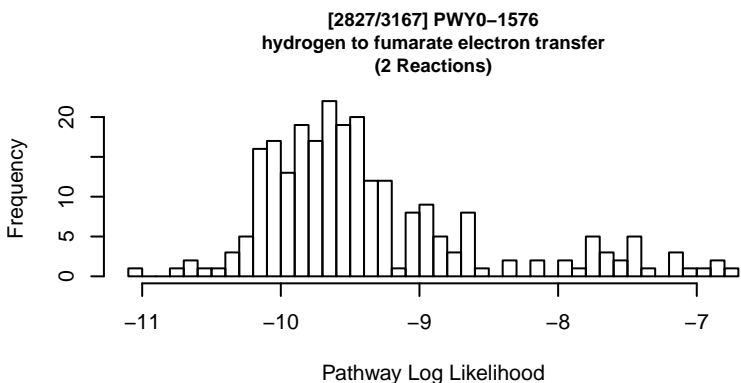
[2824/3167] PWY0-1568
NADH to cytochrome *c*₁ oxidase electron transfer II
(2 Reactions)

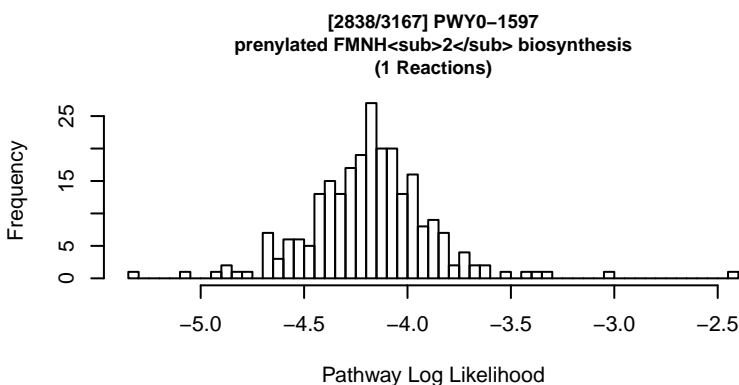
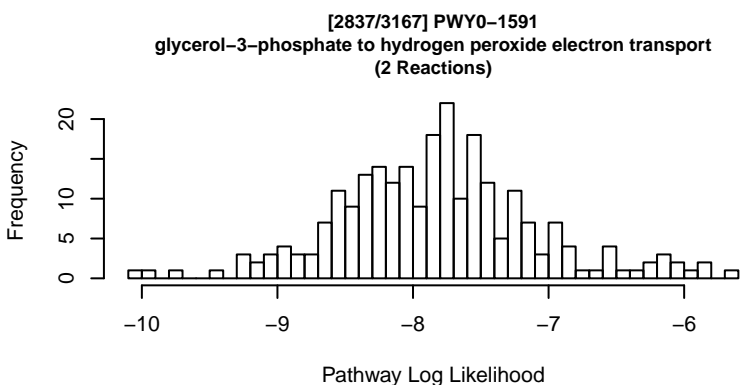
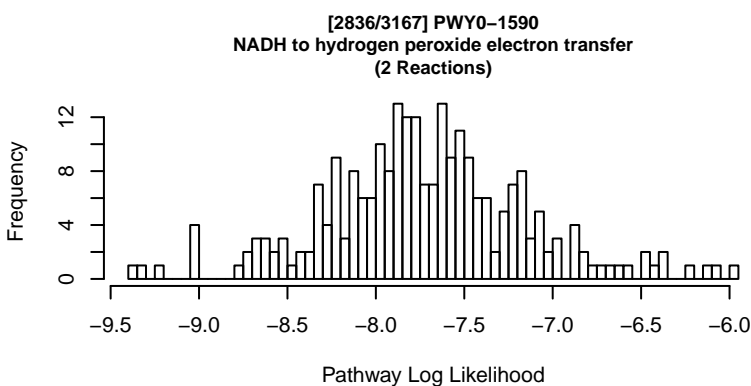
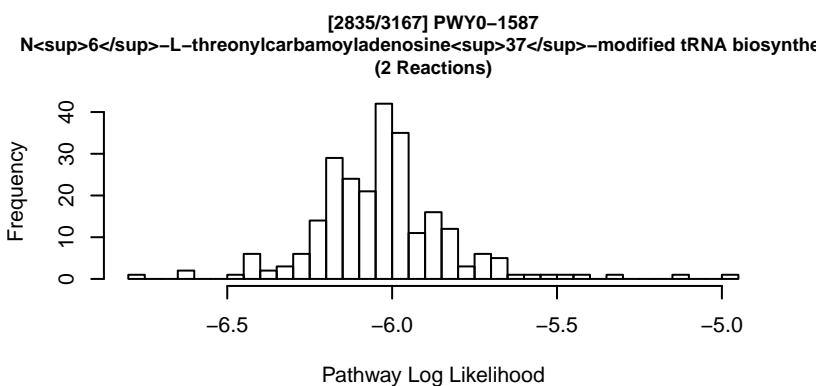
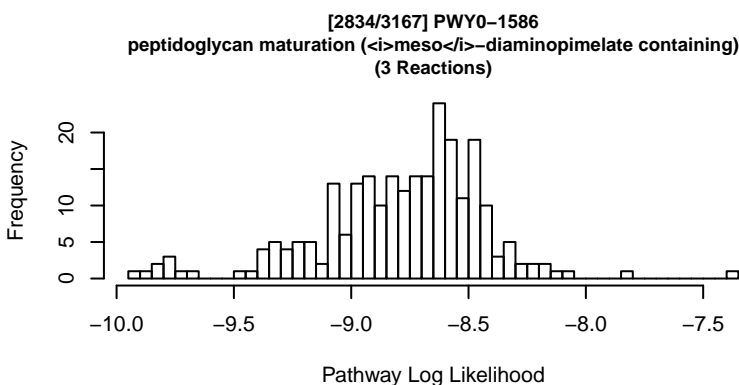
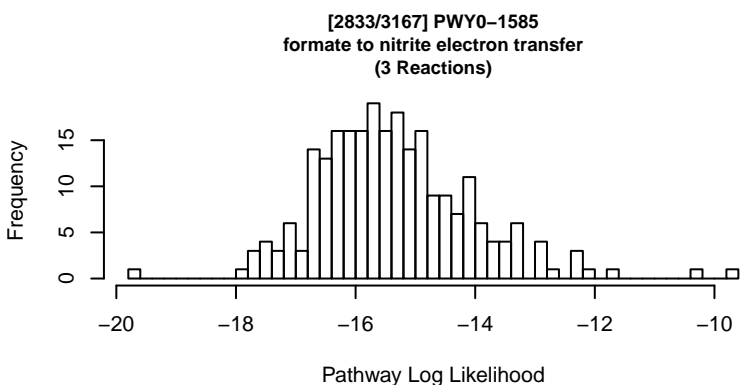
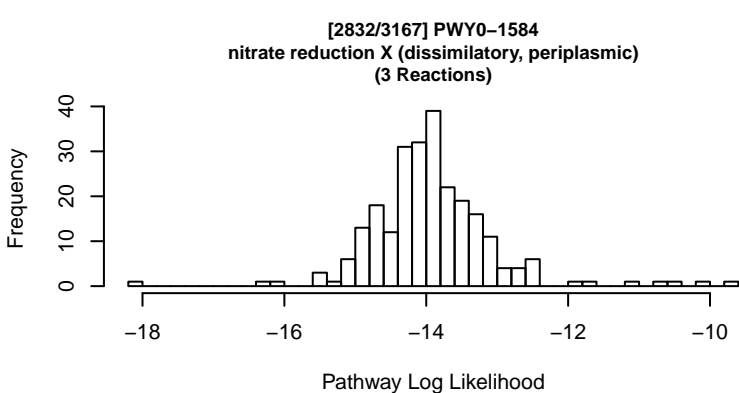
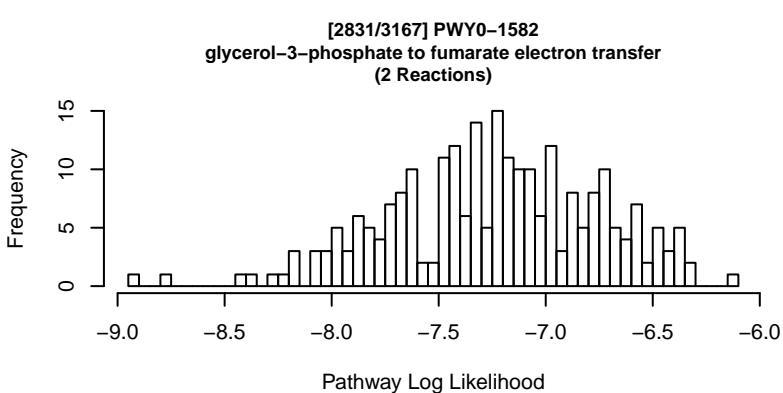
Missing 1 Reaction(s) from Pathway.



[2826/3167] PWY0-1573
nitrate reduction VIIIb (dissimilatory)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



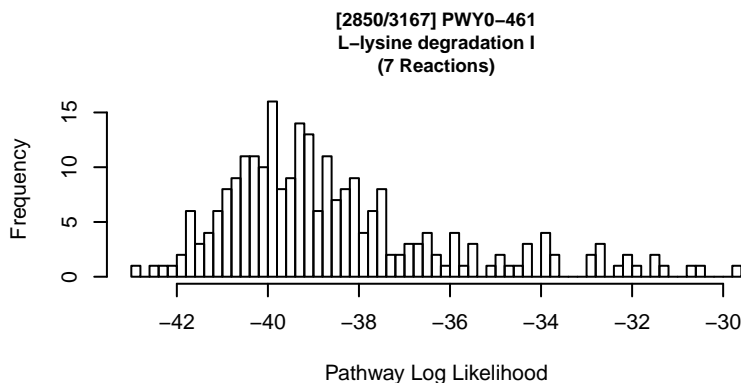
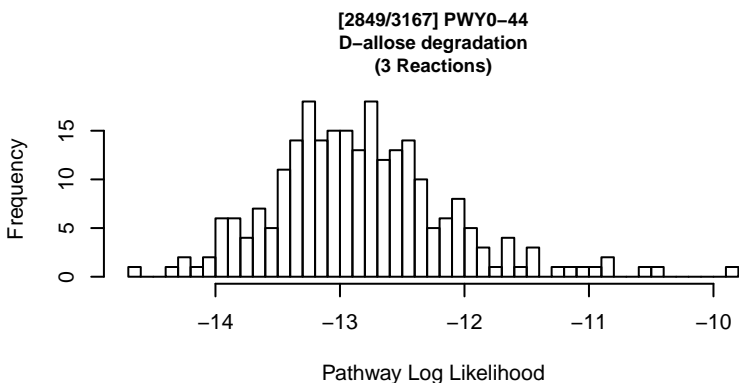
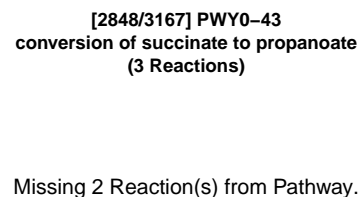
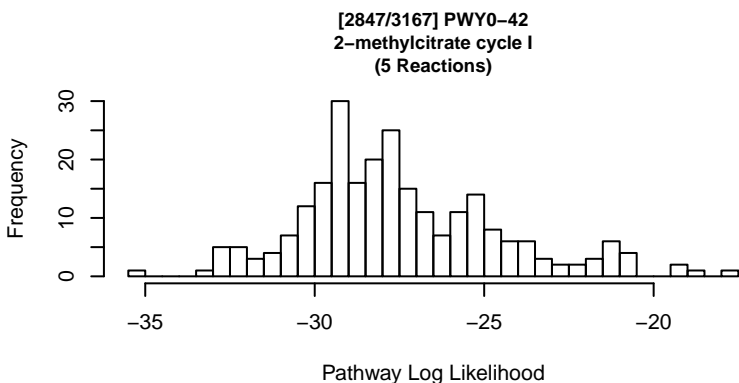
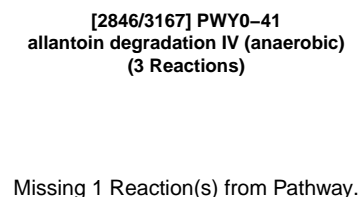
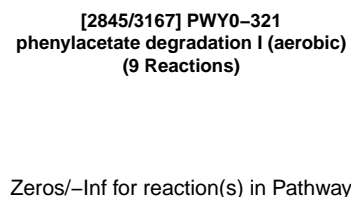
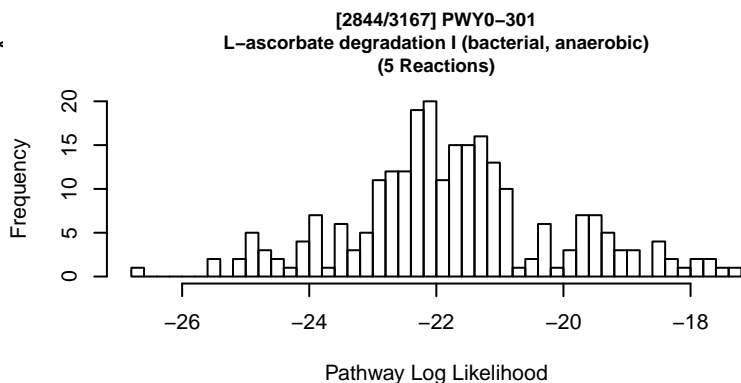
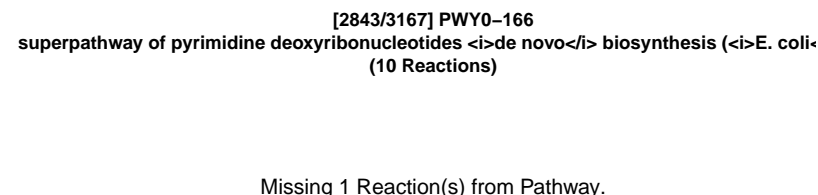
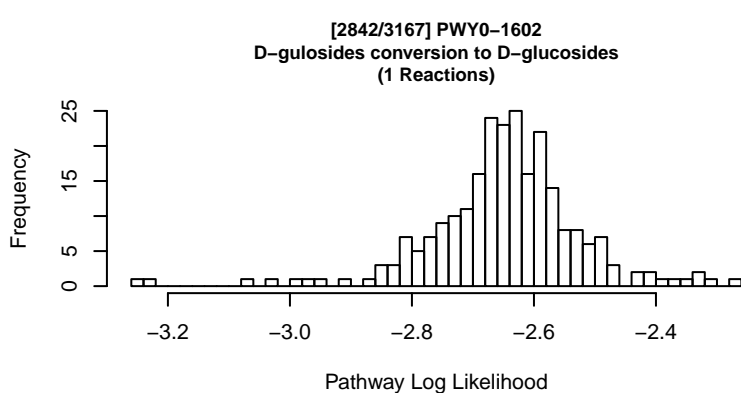
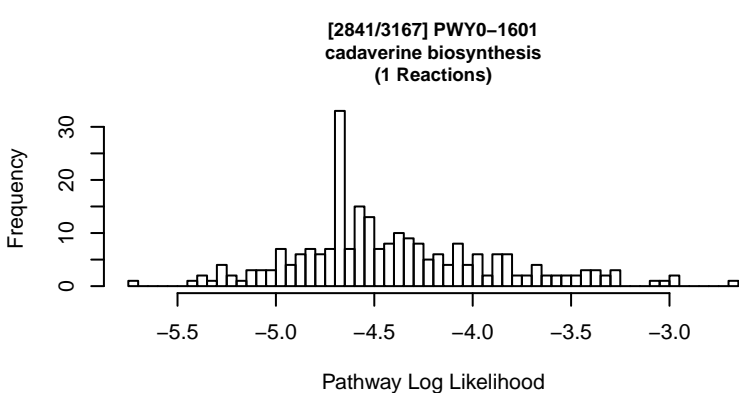


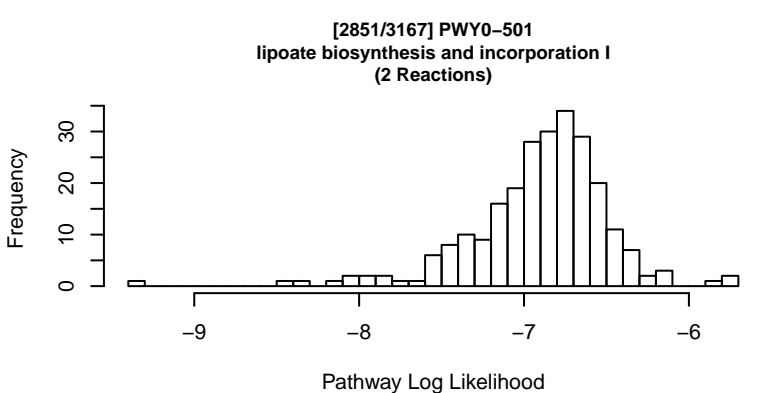
[2839/3167] PWY0-1599
periplasmic disulfide bond formation
(1 Reactions)

[2840/3167] PWY0-1600
periplasmic disulfide bond reduction
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

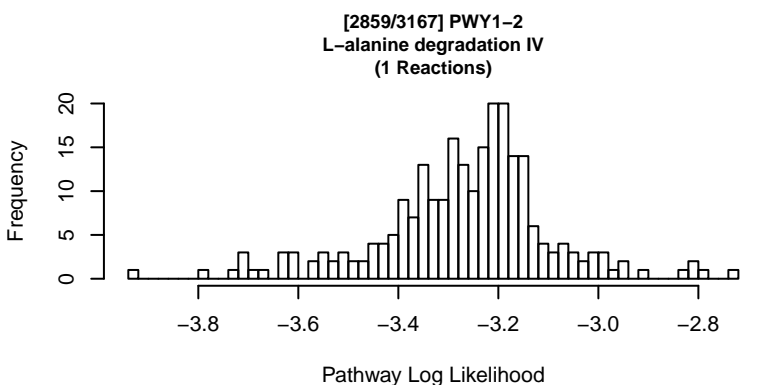
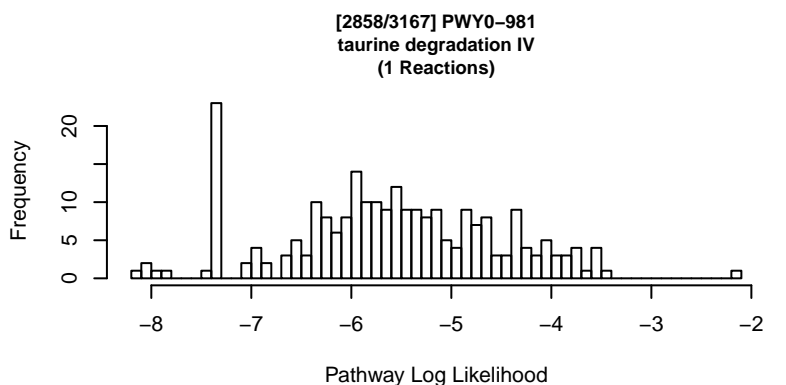
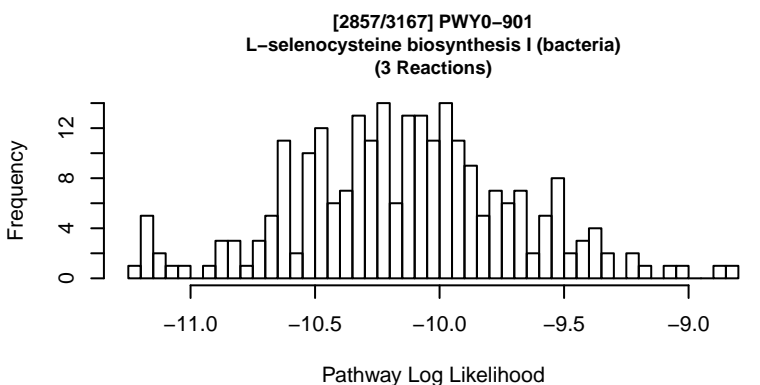
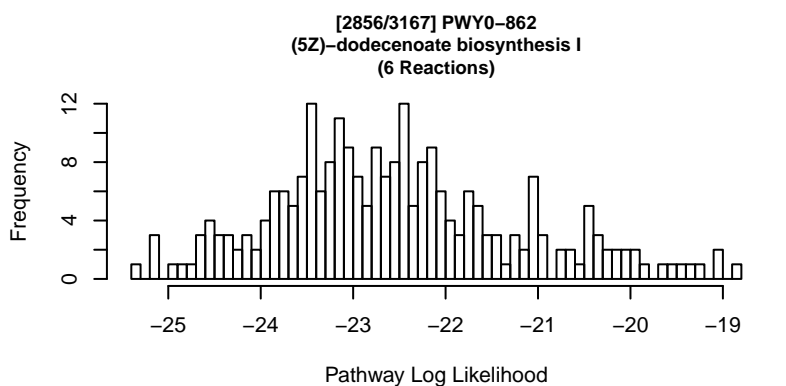
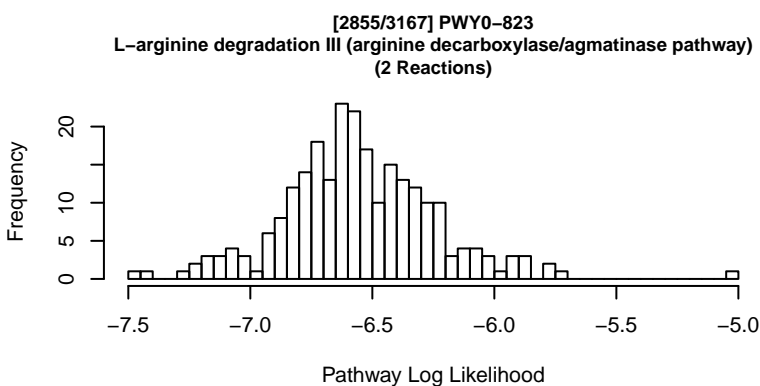
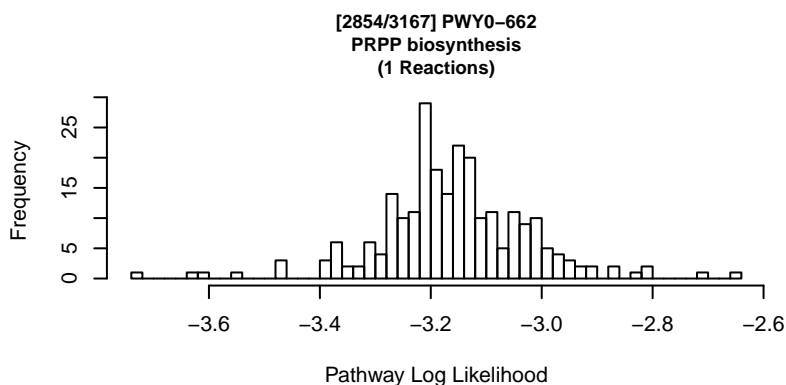
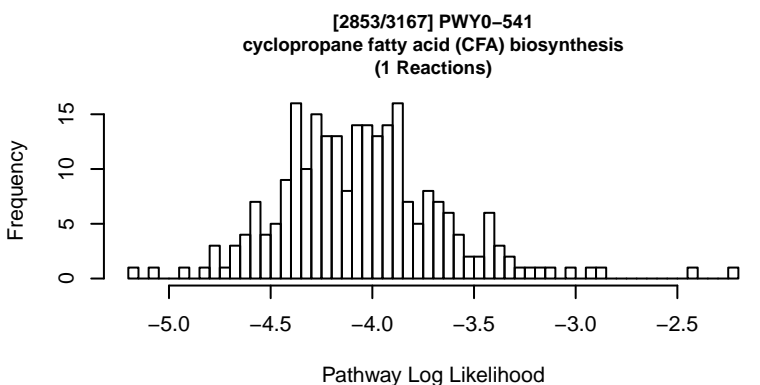
Missing ALL Reaction(s) from Pathway.





[2852/3167] PWY0-521
fructoselysine and psicoselysine degradation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



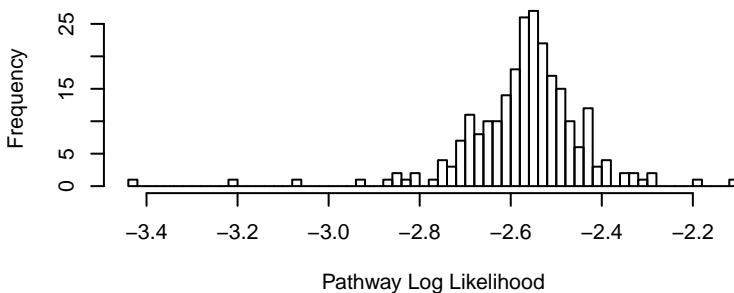
[2860/3167] PWY1-3
polyhydroxybutanoate biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

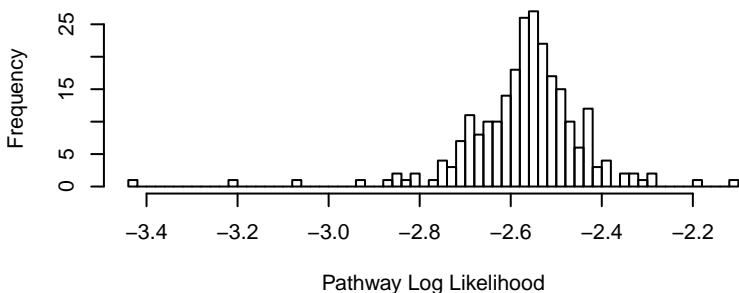
[2861/3167] PWY18C3-1
cholesterol biosynthesis (plants, early side-chain reductase)
(11 Reactions)

Missing ALL Reaction(s) from Pathway.

[2862/3167] PWY18C3-10
triacylsucrose biosynthesis (<i>Solanum</i>)
(1 Reactions)



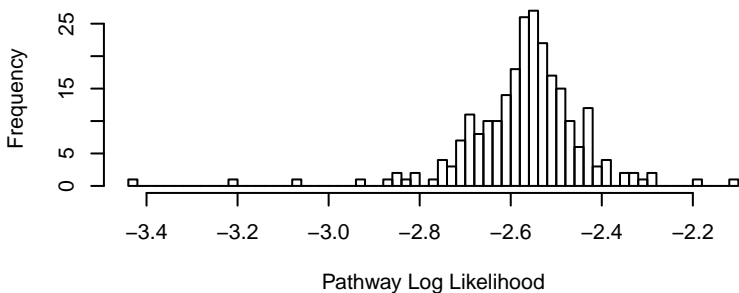
[2863/3167] PWY18C3-11
tetraacylsucrose biosynthesis (<i>Solanum</i>)
(1 Reactions)



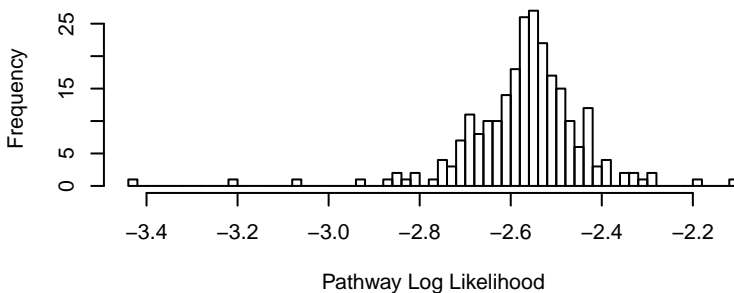
[2864/3167] PWY18C3-13
<i>cis</i>-abienol biosynthesis
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2865/3167] PWY18C3-15
acylsucrose biosynthesis (<i>Solanum pennellii</i>)
(1 Reactions)



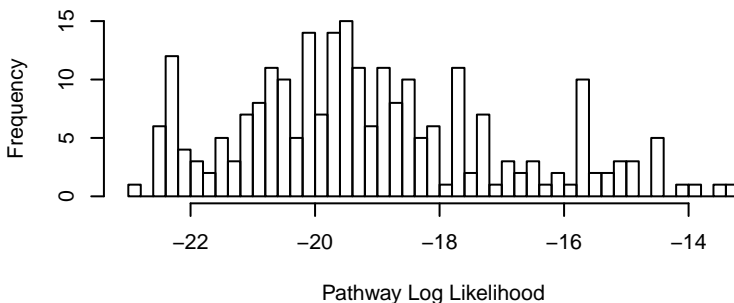
[2866/3167] PWY18C3-16
acylsucrose biosynthesis (<i>Solanum habrochaites</i>)
(1 Reactions)



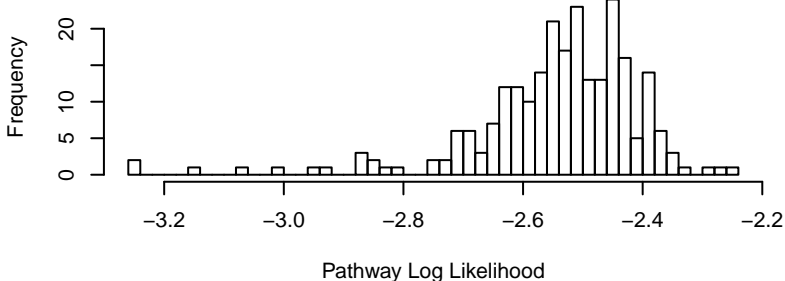
[2867/3167] PWY18C3-18
labdenediol and sclareol biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

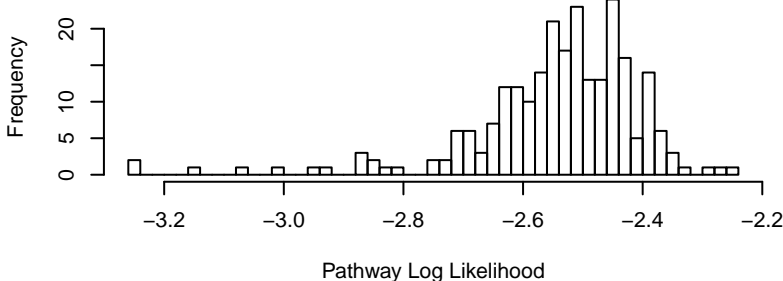
[2868/3167] PWY18C3-2
solasodine and soladulcidine biosynthesis
(4 Reactions)



[2869/3167] PWY18C3-20
gentisate 5-<i>O</i>-β-<i>D</i>-xylopyranoside biosynthesis
(1 Reactions)



[2870/3167] PWY18C3-21
phenylpropanoid volatiles glycoconjugation (tomato)
(1 Reactions)



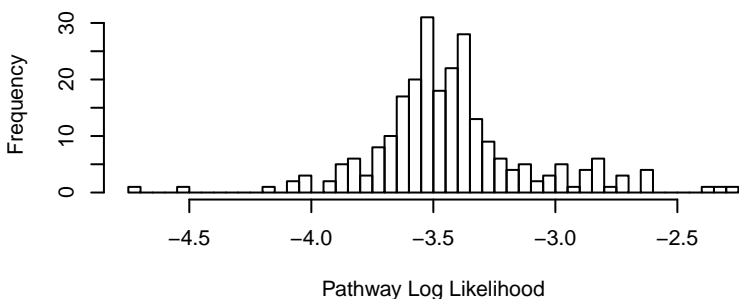
[2871/3167] PWY18C3-22
methylsalicylate biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

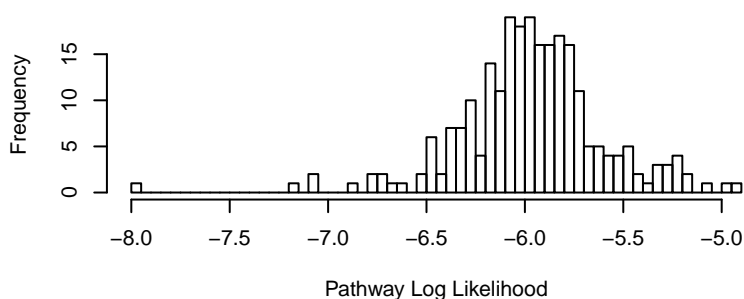
[2872/3167] PWY18C3-23
guaiacol biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

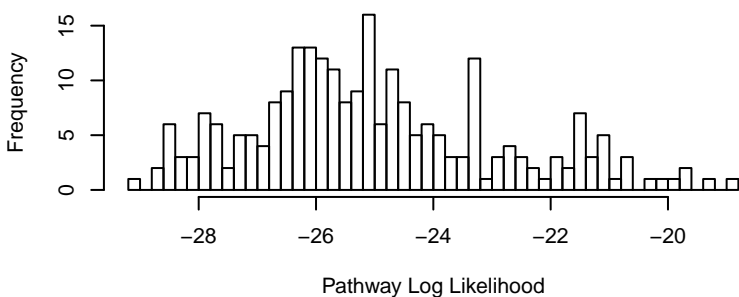
[2873/3167] PWY18C3-24
methylsalicylate degradation
(1 Reactions)



[2874/3167] PWY18C3-25
superpathway of methylsalicylate metabolism
(2 Reactions)



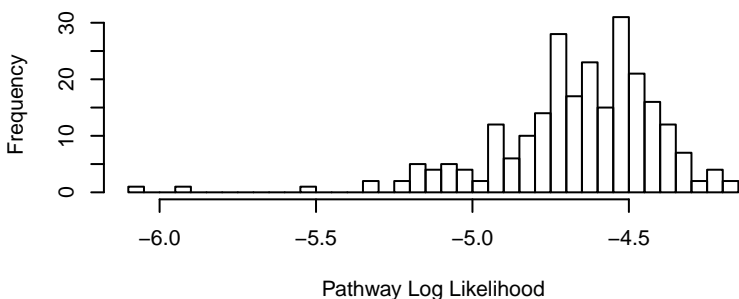
[2875/3167] PWY18C3-3
α-tomatine biosynthesis
(6 Reactions)



[2876/3167] PWY18C3-4
solasodine glycosylation
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

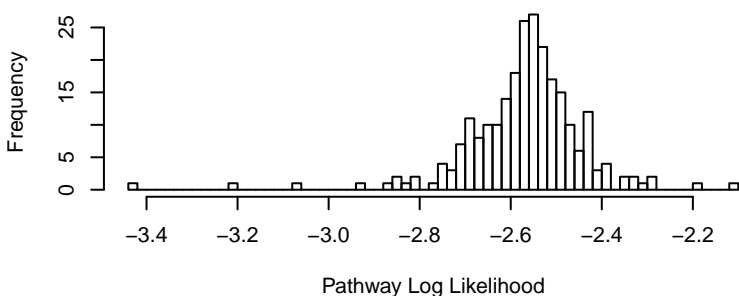
[2877/3167] PWY18C3-5
α-tomatine degradation
(2 Reactions)



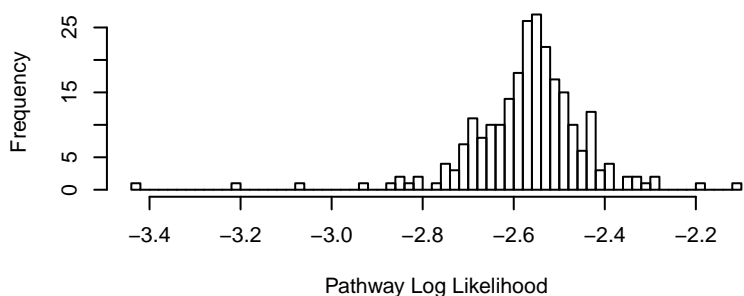
[2878/3167] PWY18C3-7
cembratrienediol biosynthesis
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2879/3167] PWY18C3-8
monoacylsucrose biosynthesis (<i>Solanum</i>)
(1 Reactions)



[2880/3167] PWY18C3-9
diacylsucrose biosynthesis (<i>Solanum</i>)
(1 Reactions)



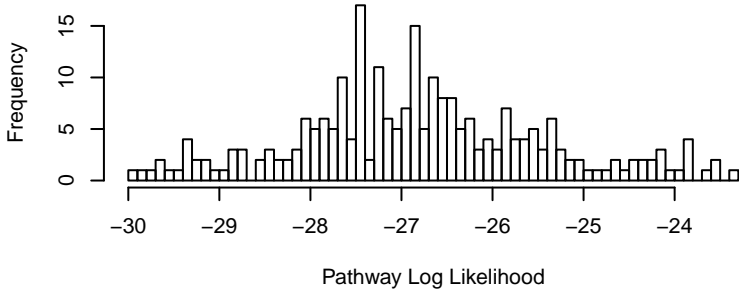
[2881/3167] PWY18HP-2
decaprenoxanthin diglucoside biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2882/3167] PWY1A0-6120
streptorubin B biosynthesis
(13 Reactions)

Missing 2 Reaction(s) from Pathway.

[2883/3167] PWY1A0-6325
actinorhodin biosynthesis
(7 Reactions)



[2884/3167] PWY1F-353
glycine betaine biosynthesis III (plants)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2885/3167] PWY1F-467
phenylpropanoid biosynthesis, initial reactions
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

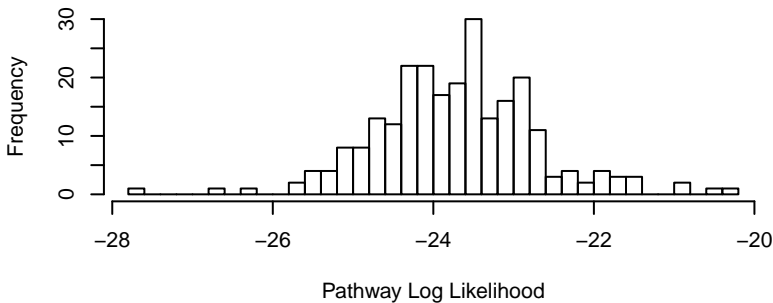
[2886/3167] PWY1F-823
leucopelargonidin and leucocyanidin biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

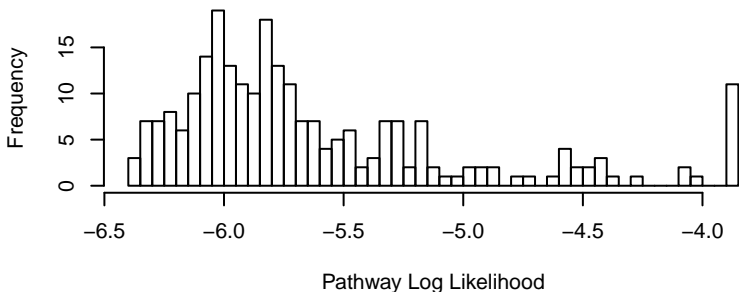
[2887/3167] PWY1F-FLAVSYN
flavonoid biosynthesis
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2888/3167] PWY1G-0
mycothiol biosynthesis
(5 Reactions)



[2889/3167] PWY1G-1
mycothiol-mediated detoxification
(1 Reactions)



[2890/3167] PWY1G-126
mycothiol oxidation
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

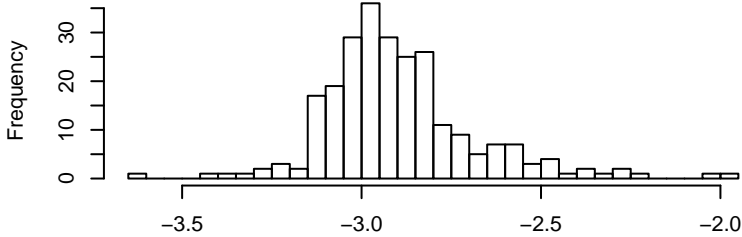
[2891/3167] PWY1G-170
formaldehyde oxidation III (mycothiol-dependent)
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2892/3167] PWY1G01-4
glutarate degradation
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2893/3167] PWY1QP9-2
fructosyllysine and glucosyllysine metabolism
(1 Reactions)



[2894/3167] PWY1R65-1
lipid A-core biosynthesis (*Salmonella*)
(9 Reactions)

Missing 5 Reaction(s) from Pathway.

[2895/3167] PWY1YI0-1
arsenate detoxification V
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2896/3167] PWY1YI0-2
succinate to cytochrome *c* oxidase via cytochrome *c*₆
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

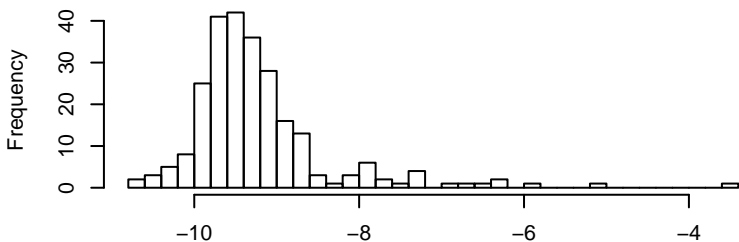
[2897/3167] PWY1YI0-3
succinate to cytochrome *c* oxidase via plastocyanin
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

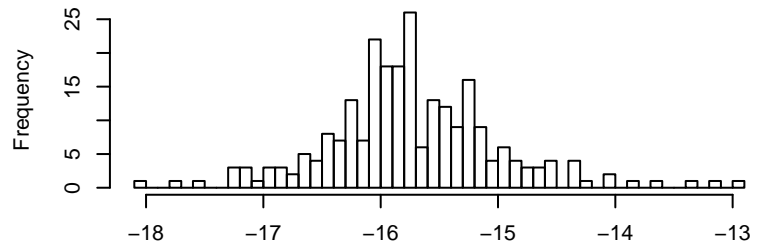
[2898/3167] PWY1YI0-7
protective electron sinks in the thylakoid membrane (PSII to PTOX)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2899/3167] PWY1YI0-8
succinate to plastoquinol oxidase
(2 Reactions)



[2900/3167] PWY1ZNC-1
assimilatory sulfate reduction IV
(4 Reactions)



[2901/3167] PWY2B4Q-2
GDP-*N*-formyl- α -D-perosamine biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2902/3167] PWY2B4Q-3
Brucella abortus O antigen biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

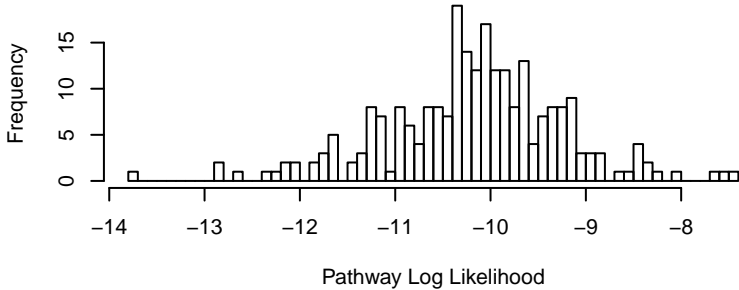
[2903/3167] PWY2B4Q-4
lipid IV_A biosynthesis (2,3-diamino-2,3-dideoxy-D-glucopyranose-containi
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[2904/3167] PWY2B4Q-6
Kdo transfer to lipid IV_A (*Brucella*)
(2 Reactions)

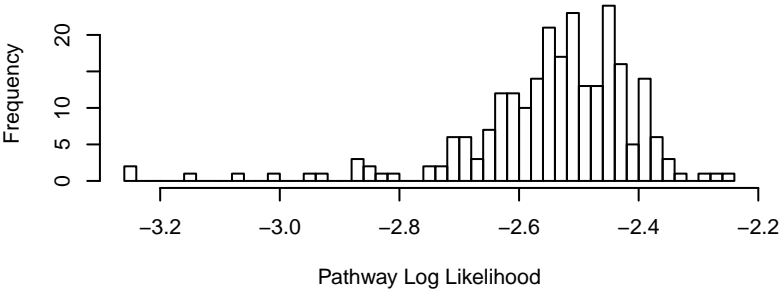
Missing 1 Reaction(s) from Pathway.

[2905/3167] PWY2B4Q-7
(Kdo)₂-lipid A biosynthesis I (*Brucella*)
(2 Reactions)



Pathway Log Likelihood

[2906/3167] PWY2B4Q-8
lipid A-core biosynthesis (*Brucella*)
(1 Reactions)



Pathway Log Likelihood

[2907/3167] PWY3DJ-11281
sphingomyelin metabolism
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2908/3167] PWY3DJ-11470
sphingosine and sphingosine-1-phosphate metabolism
(7 Reactions)

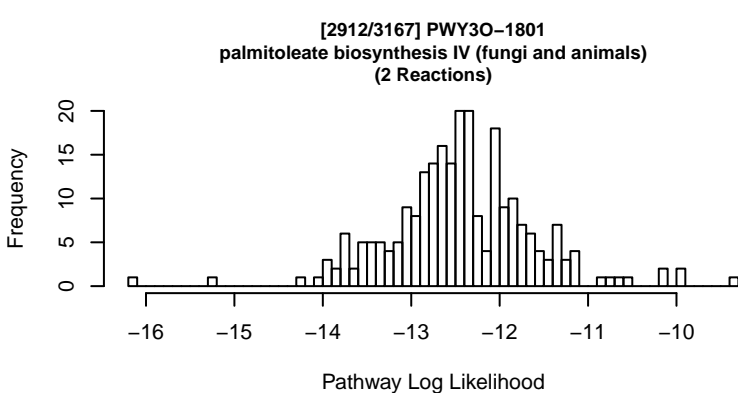
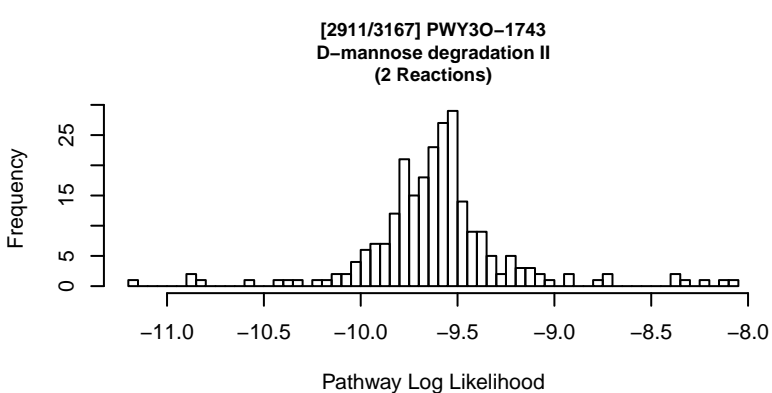
Missing 4 Reaction(s) from Pathway.

[2909/3167] PWY3DJ-12
ceramide *de novo* biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

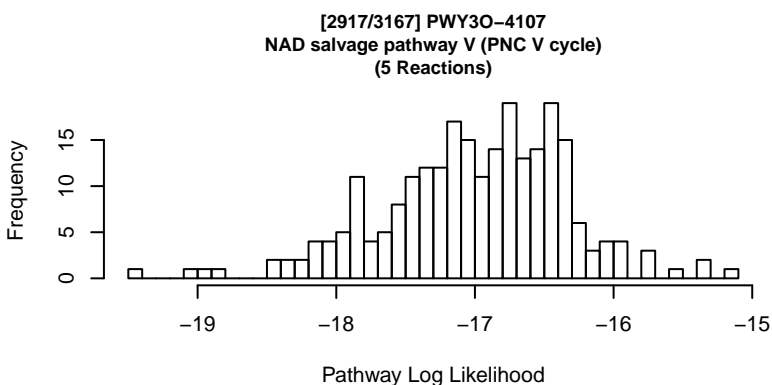
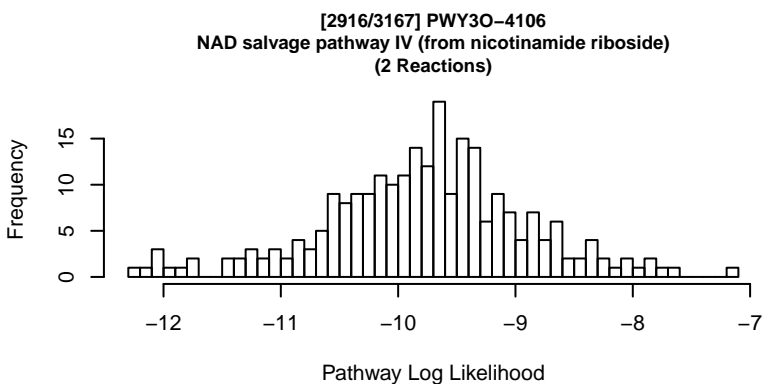
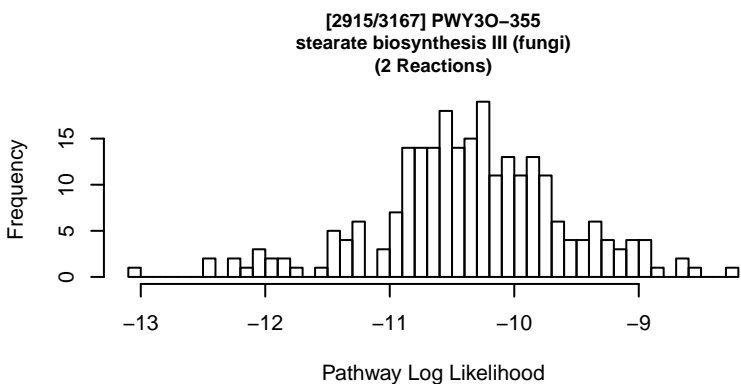
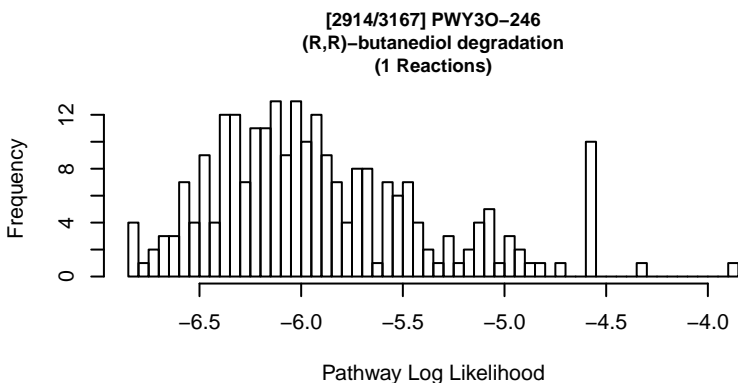
[2910/3167] PWY3DJ-35471
L-ascorbate biosynthesis IV (animals, D-glucuronate pathway)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

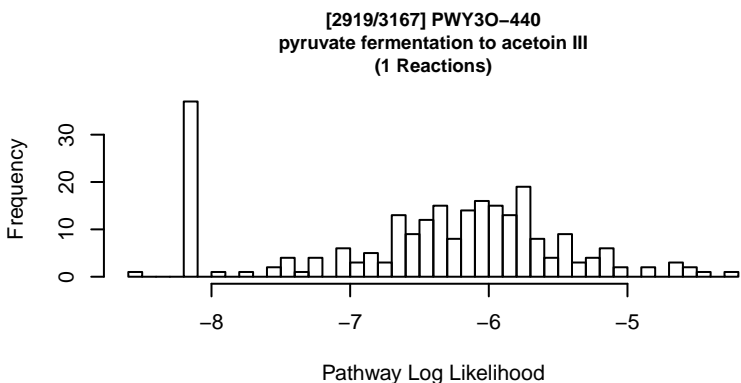


[2913/3167] PWY30-19
ubiquinol-6 biosynthesis (late decarboxylation)
(8 Reactions)

Missing 1 Reaction(s) from Pathway.



Missing 3 Reaction(s) from Pathway.



[2920/3167] PWY30-450
phosphatidylcholine biosynthesis I
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

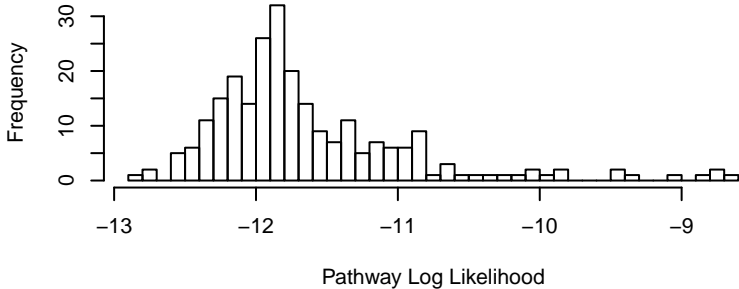
[2921/3167] PWY3O-6
dehydro-D-arabinono-1,4-lactone biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2922/3167] PWY490-3
nitrate reduction VI (assimilatory)
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2923/3167] PWY490-4
L-asparagine biosynthesis III (tRNA-dependent)
(3 Reactions)



[2924/3167] PWY4FS-11
L-ascorbate biosynthesis II (plants, L-gulose pathway)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2925/3167] PWY4FS-12
VTC2 cycle
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[2926/3167] PWY4FS-13
extended VTC2 cycle
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2927/3167] PWY4FS-17
abscisic acid biosynthesis shunt
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2928/3167] PWY4FS-2
phosphatidylcholine biosynthesis II
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2929/3167] PWY4FS-3
phosphatidylcholine biosynthesis III
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

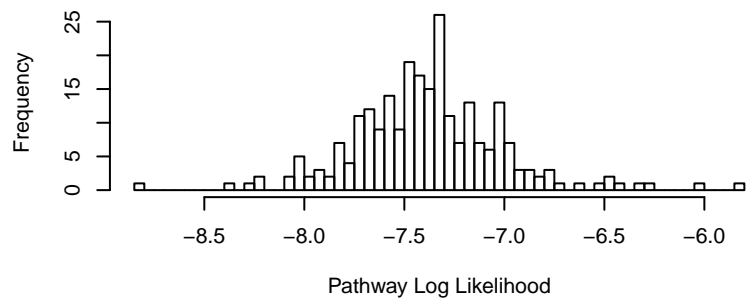
[2930/3167] PWY4FS-4
phosphatidylcholine biosynthesis IV
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

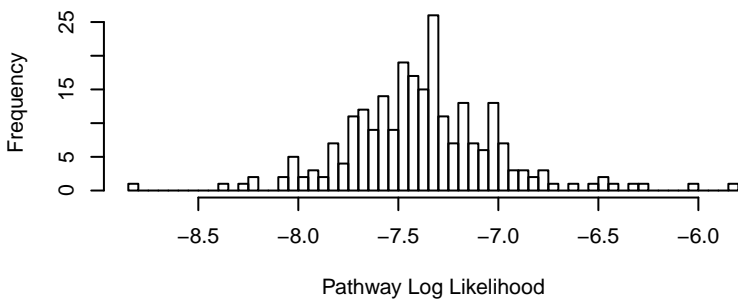
[2931/3167] PWY4FS-6
phosphatidylethanolamine biosynthesis II
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

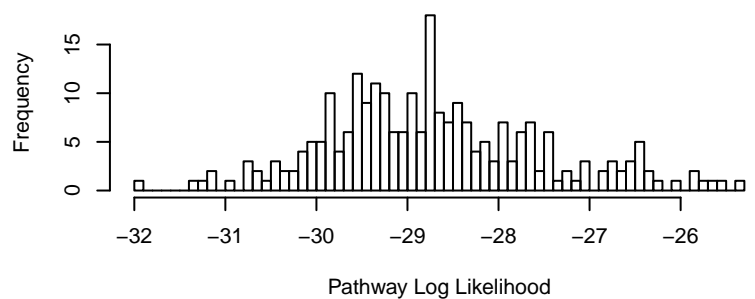
[2932/3167] PWY4FS-7
phosphatidylglycerol biosynthesis I (plastidic)
(2 Reactions)



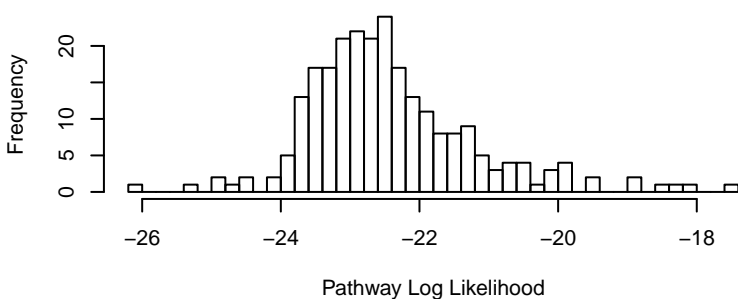
[2933/3167] PWY4FS-8
phosphatidylglycerol biosynthesis II (non-plastidic)
(2 Reactions)



[2934/3167] PWY4LZ-257
superpathway of fermentation (<i>Chlamydomonas reinhardtii</i>)
(8 Reactions)



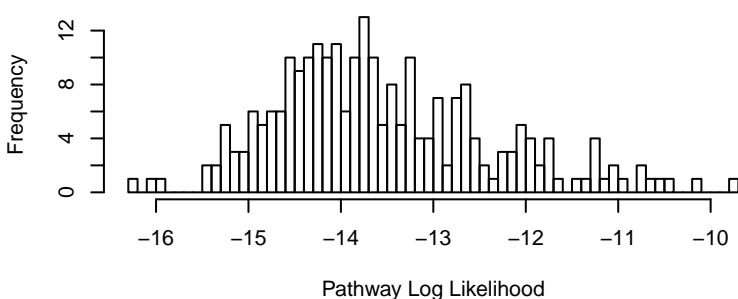
[2935/3167] PWY5F9-12
biphenyl degradation
(4 Reactions)



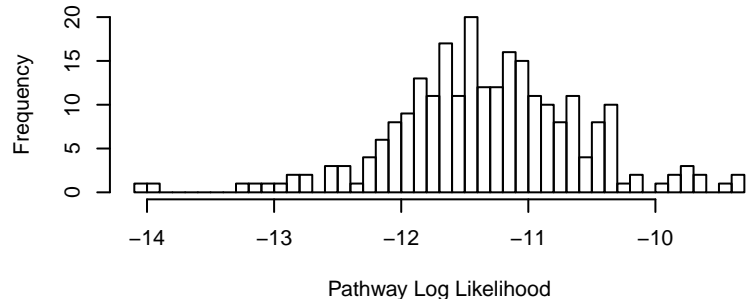
[2936/3167] PWY5F9-3233
phthalate degradation (aerobic)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2937/3167] PWY66-161
ethanol degradation III
(3 Reactions)



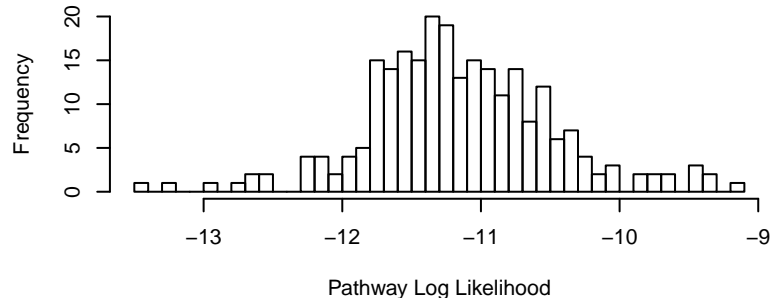
[2938/3167] PWY66-162
ethanol degradation IV
(3 Reactions)



[2939/3167] PWY66-201
nicotine degradation IV
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

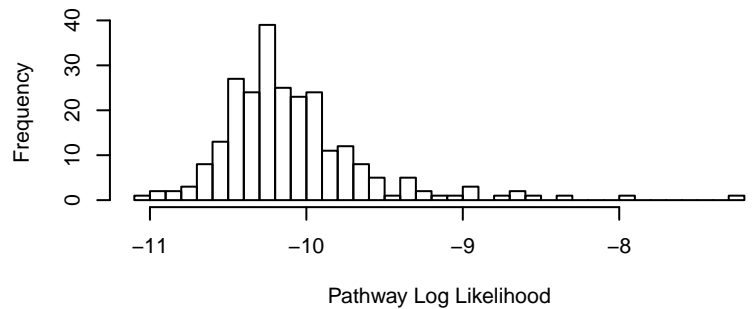
[2940/3167] PWY66-21
ethanol degradation II
(3 Reactions)



[2941/3167] PWY66-221
nicotine degradation V
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[2942/3167] PWY66-241
bupropion degradation
(2 Reactions)



[2943/3167] PWY66-3
cholesterol biosynthesis II (via 24,25-dihydrolanosterol)
(9 Reactions)

Missing 8 Reaction(s) from Pathway.

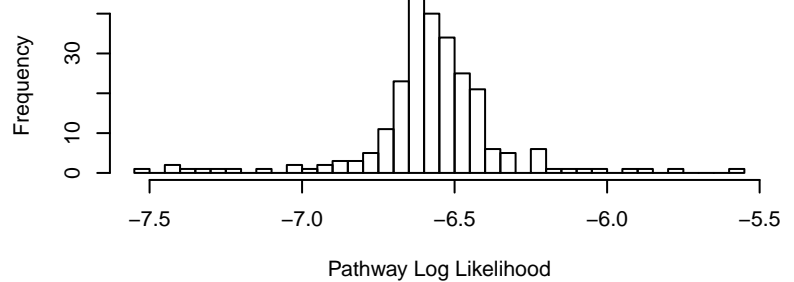
[2944/3167] PWY66-301
catecholamine biosynthesis
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

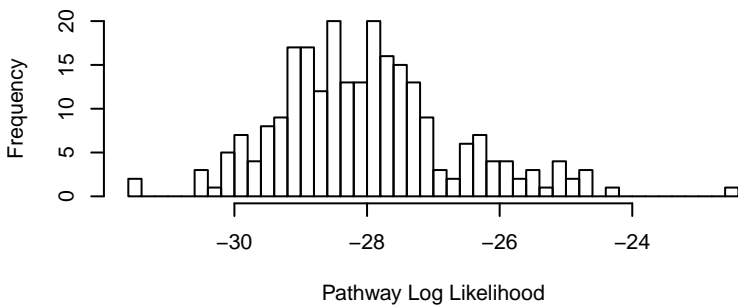
[2945/3167] PWY66-341
cholesterol biosynthesis I
(7 Reactions)

Missing 6 Reaction(s) from Pathway.

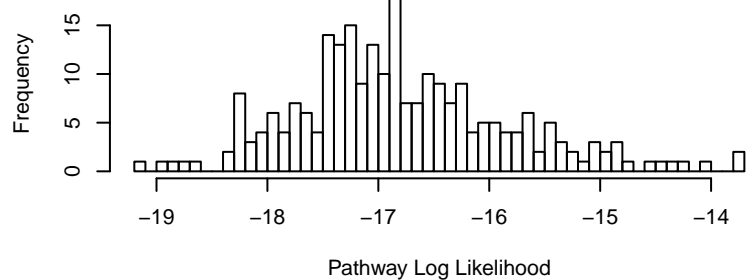
[2946/3167] PWY66-366
flavin salvage
(2 Reactions)



[2947/3167] PWY66-367
ketogenesis
(6 Reactions)



[2948/3167] PWY66-368
ketolysis
(4 Reactions)



[2949/3167] PWY66-373
sucrose degradation V (sucrose α -glucosidase)
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[2950/3167] PWY66-374
C20 prostanoid biosynthesis
(13 Reactions)

Missing 9 Reaction(s) from Pathway.

[2951/3167] PWY66-375
leukotriene biosynthesis
(5 Reactions)

Missing 3 Reaction(s) from Pathway.

[2952/3167] PWY66-378
androgen biosynthesis
(6 Reactions)

Missing 2 Reaction(s) from Pathway.

[2953/3167] PWY66-380
estradiol biosynthesis I (via estrone)
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

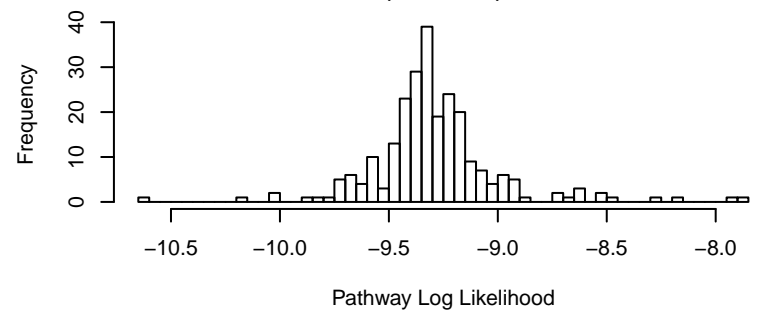
[2954/3167] PWY66-381
glucocorticoid biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2955/3167] PWY66-382
mineralocorticoid biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2956/3167] PWY66-385
dTMP *de novo* biosynthesis (mitochondrial)
(3 Reactions)



[2957/3167] PWY66-387
3-methyl-branched fatty acid α -oxidation
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[2958/3167] PWY66-388
ceramide degradation by α -oxidation
(7 Reactions)

Missing 3 Reaction(s) from Pathway.

[2959/3167] PWY66-389
phytol degradation
(4 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2960/3167] PWY66-391
fatty acid β -oxidation VI (mammalian peroxisome)
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[2961/3167] PWY66-392
lipoxin biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[2962/3167] PWY66-393
15-*epi*-lipoxin biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2963/3167] PWY66-394
aspirin triggered resolvin E biosynthesis
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[2964/3167] PWY66-395
aspirin triggered resolvin D biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2965/3167] PWY66-397
resolvin D biosynthesis
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2966/3167] PWY66-398
TCA cycle III (animals)
(10 Reactions)

Missing 2 Reaction(s) from Pathway.

[2967/3167] PWY66-399
gluconeogenesis III
(13 Reactions)

Missing 2 Reaction(s) from Pathway.

[2968/3167] PWY66-4
cholesterol biosynthesis III (via desmosterol)
(4 Reactions)

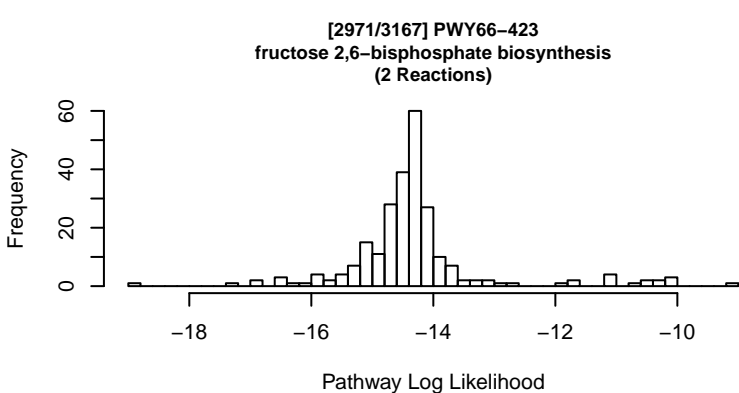
Missing ALL Reaction(s) from Pathway.

[2969/3167] PWY66-420
carnosine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2970/3167] PWY66-421
homocarnosine biosynthesis
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[2972/3167] PWY66-425
L-lysine degradation II (L-pipecolate pathway)
(7 Reactions)

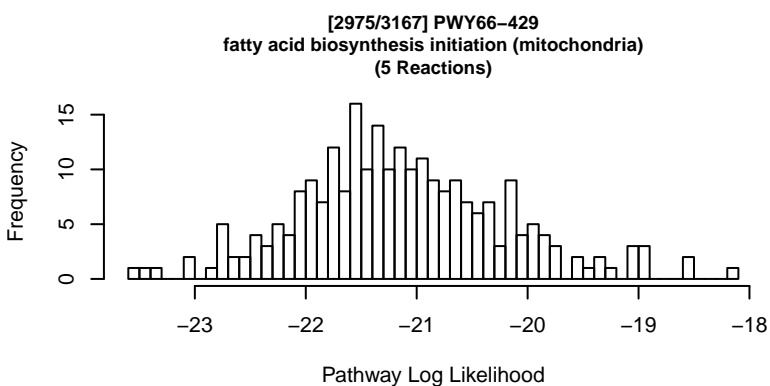
Missing 3 Reaction(s) from Pathway.

[2973/3167] PWY66-426
hydrogen sulfide biosynthesis II (mammalian)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2974/3167] PWY66-428
L-threonine degradation V
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway



[2976/3167] PWY66-430
tetradecanoate biosynthesis (mitochondria)
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[2977/3167] PWY6666-1
anandamide degradation
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[2978/3167] PWY6666-2
dopamine degradation
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[2979/3167] PWY8J2-1
bacillithiol biosynthesis
(3 Reactions)

Missing ALL Reaction(s) from Pathway.

[2980/3167] PWY8J2-20
pulcherrimin biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2981/3167] PWY8J2-22
kanosamine biosynthesis II
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[2982/3167] PWYDQC-4
indole-3-acetate biosynthesis I
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

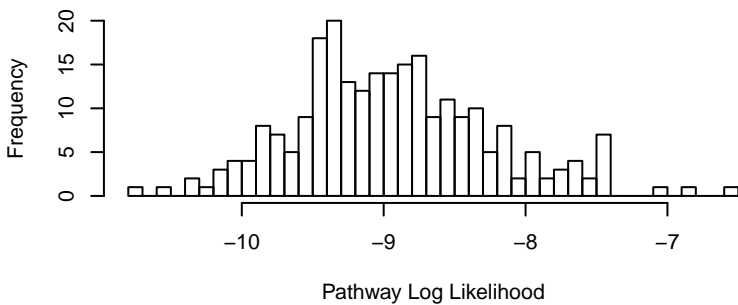
[2983/3167] PWYG-321
mycolate biosynthesis
(24 Reactions)

Missing 8 Reaction(s) from Pathway.

[2984/3167] PWYQT-4427
sulfoquinosyl diacylglycerol biosynthesis
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2985/3167] PWYQT-4429
CO₂ fixation into oxaloacetate (anaplerotic)
(2 Reactions)



[2986/3167] PWYQT-4450
aliphatic glucosinolate biosynthesis, side chain elongation cycle
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[2987/3167] PWYQT-4471
glucosinolate biosynthesis from dihomomethionine
(9 Reactions)

Missing 7 Reaction(s) from Pathway.

[2988/3167] PWYQT-4472
glucosinolate biosynthesis from trihomomethionine
(9 Reactions)

Missing 7 Reaction(s) from Pathway.

[2989/3167] PWYQT-4473
glucosinolate biosynthesis from tetrahomomethionine
(8 Reactions)

Missing 6 Reaction(s) from Pathway.

[2990/3167] PWYQT-4474
glucosinolate biosynthesis from pentahomomethionine
(8 Reactions)

Missing 6 Reaction(s) from Pathway.

[2991/3167] PWYQT-4475
glucosinolate biosynthesis from hexahomomethionine
(8 Reactions)

Missing 6 Reaction(s) from Pathway.

[2992/3167] PWYQT-4476
indole glucosinolate activation (herbivore attack)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

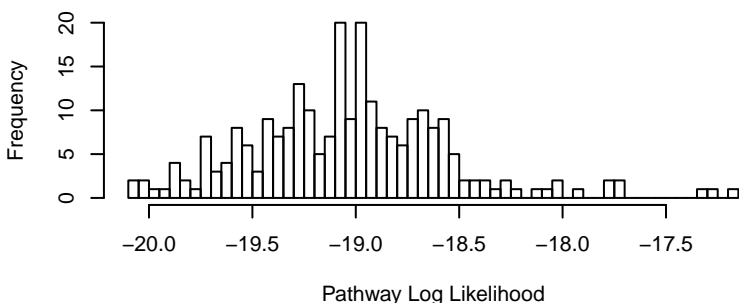
[2993/3167] PWYQT-4477
indole glucosinolate activation (intact plant cell)
(7 Reactions)

Missing 2 Reaction(s) from Pathway.

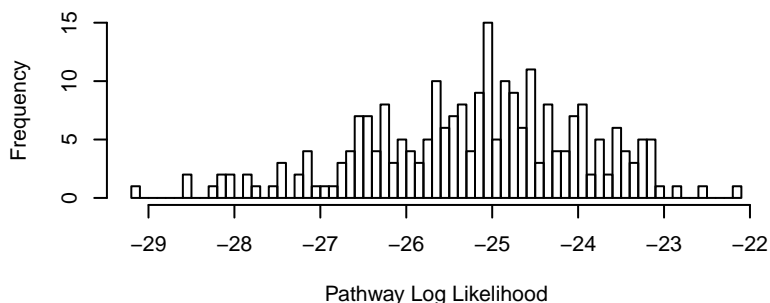
[2994/3167] PYRIDNUCSAL-PWY
NAD salvage pathway I (PNC VI cycle)
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

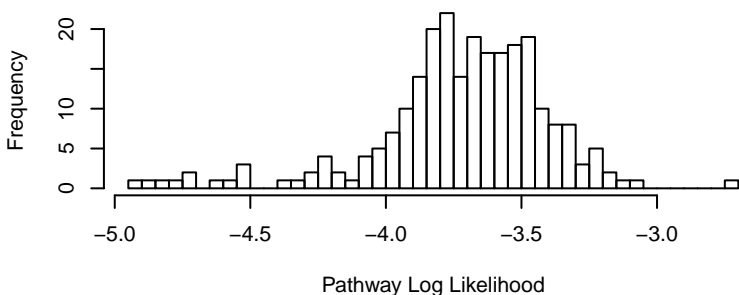
[2995/3167] PYRIDNUCSYN-PWY
NAD <i>de novo</i> biosynthesis I (from aspartate)
(6 Reactions)



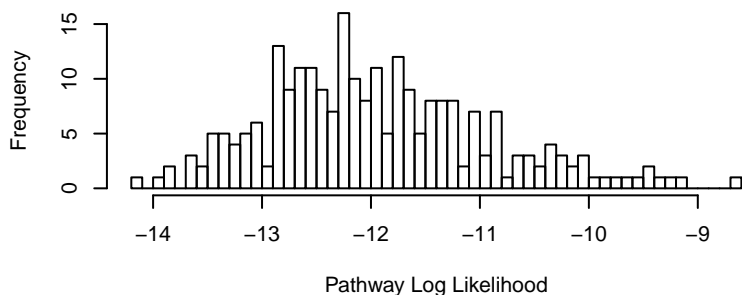
[2996/3167] PYRIDOXSYN-PWY
pyridoxal 5'-phosphate biosynthesis I
(7 Reactions)



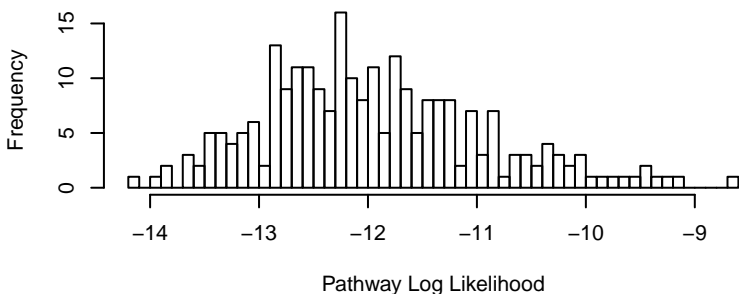
[2997/3167] PYRROLINECARBDEHYDROG-RXN
(1 Reactions)



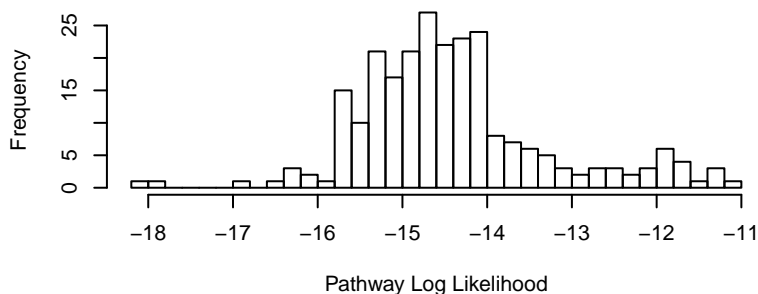
[2998/3167] PYRUVDEH-RXN
(3 Reactions)



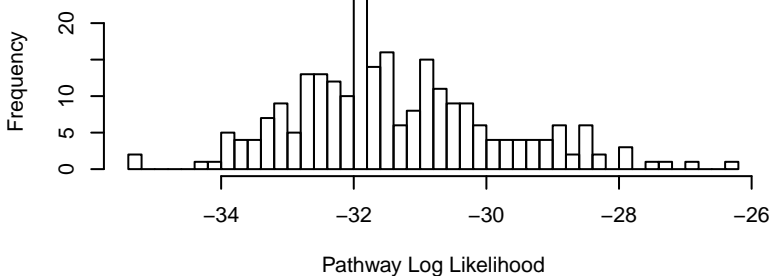
[2999/3167] PYRUVDEHYD-PWY
pyruvate decarboxylation to acetyl CoA I
(3 Reactions)



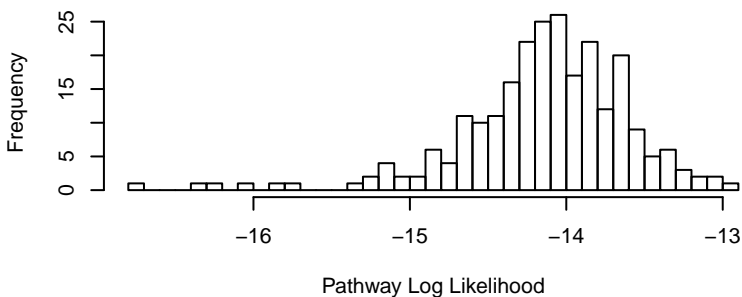
[3000/3167] QUINATEDEG-PWY
quinat degradation I
(3 Reactions)



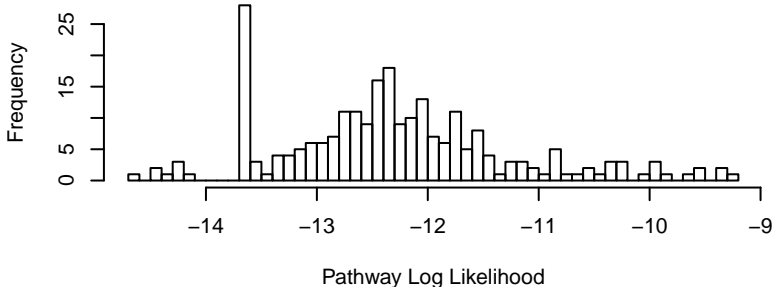
[3001/3167] REDCITCYC
TCA cycle VI (Helicobacter)
(8 Reactions)



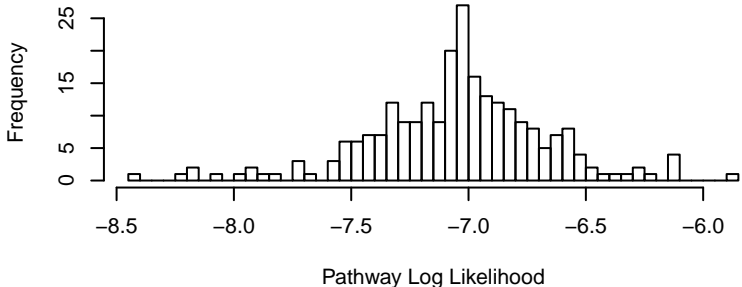
[3002/3167] RHAMCAT-PWY
L-rhamnose degradation I
(4 Reactions)



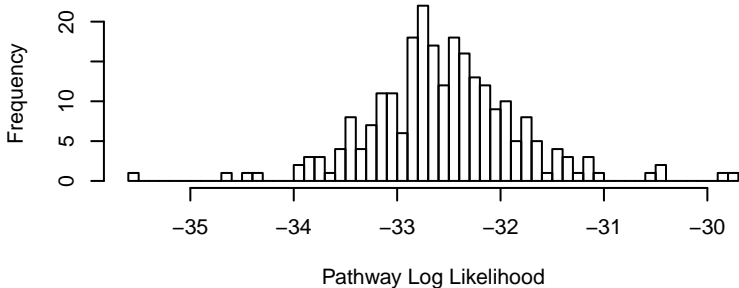
[3003/3167] RIBITOLUTIL-PWY
ribitol degradation
(2 Reactions)



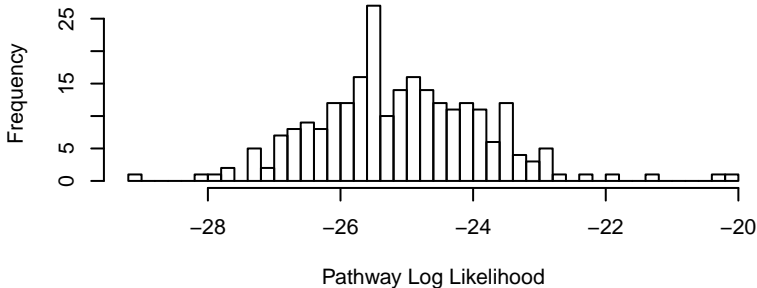
[3004/3167] RIBOKIN-PWY
ribose phosphorylation
(2 Reactions)



[3005/3167] RIBOSYN2-PWY
flavin biosynthesis I (bacteria and plants)
(9 Reactions)



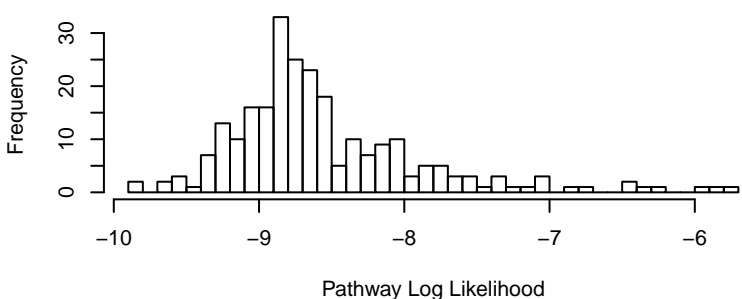
[3006/3167] RUMP-PWY
formaldehyde oxidation I
(6 Reactions)



[3007/3167] RXN-11175
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

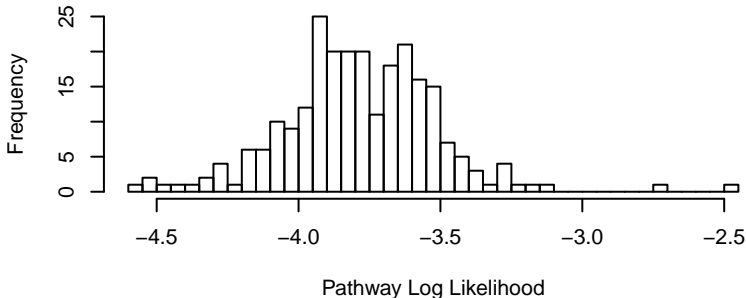
[3008/3167] RXN-11322
(2 Reactions)



[3009/3167] RXN-11453
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3010/3167] RXN-12056
(1 Reactions)



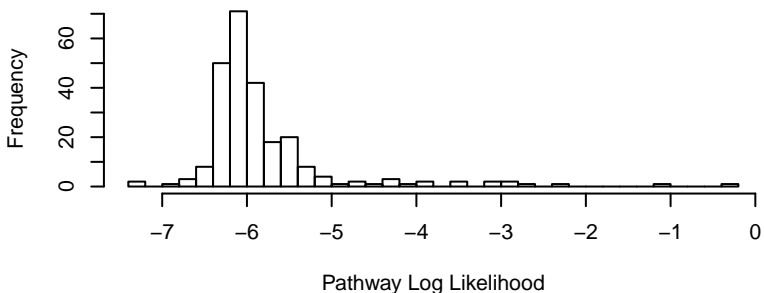
[3011/3167] RXN-12199
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[3012/3167] RXN-12200
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

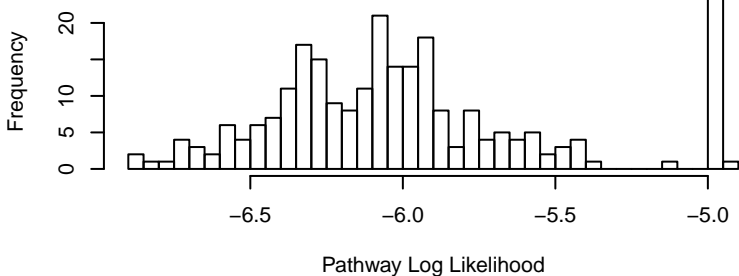
[3013/3167] RXN-12223
(1 Reactions)



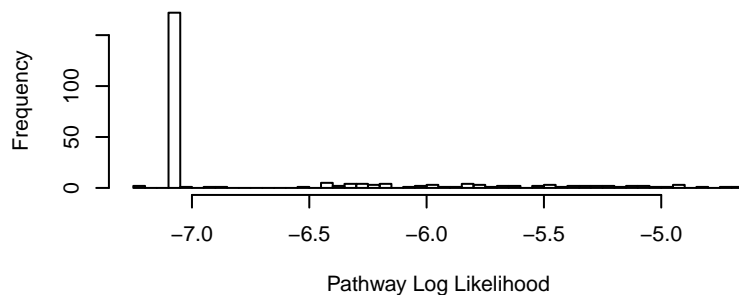
[3014/3167] RXN-12230
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[3015/3167] RXN-12321
(1 Reactions)



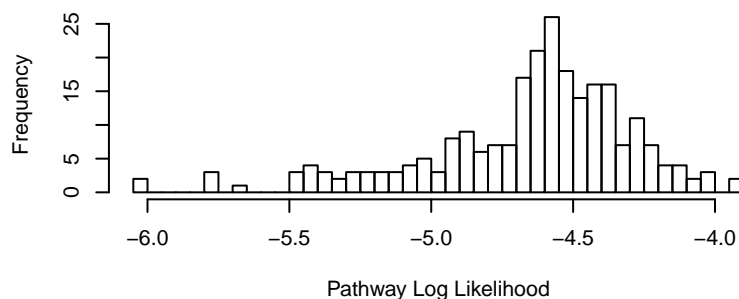
[3016/3167] RXN-12377
(1 Reactions)



[3017/3167] RXN-12535
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

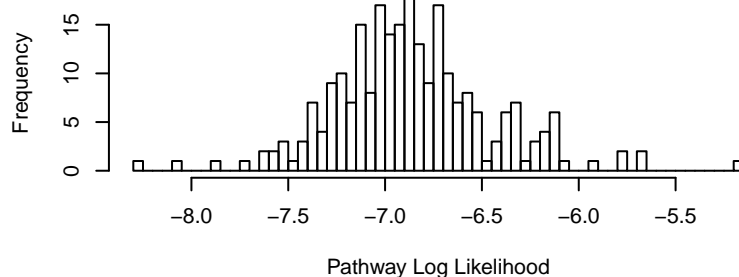
[3018/3167] RXN-12729
(1 Reactions)



[3019/3167] RXN-12892
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

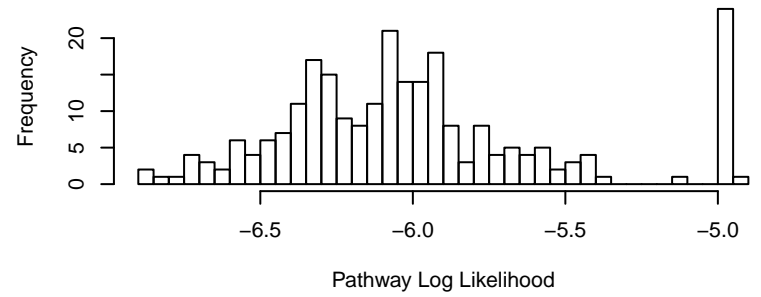
[3020/3167] RXN-12907
(2 Reactions)



[3021/3167] RXN-13030
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3022/3167] RXN-13162
(1 Reactions)



[3023/3167] RXN-13183
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3024/3167] RXN-13197
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3025/3167] RXN-13229
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3026/3167] RXN-13396
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3027/3167] RXN-13404
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[3028/3167] RXN-13405
(1 Reactions)

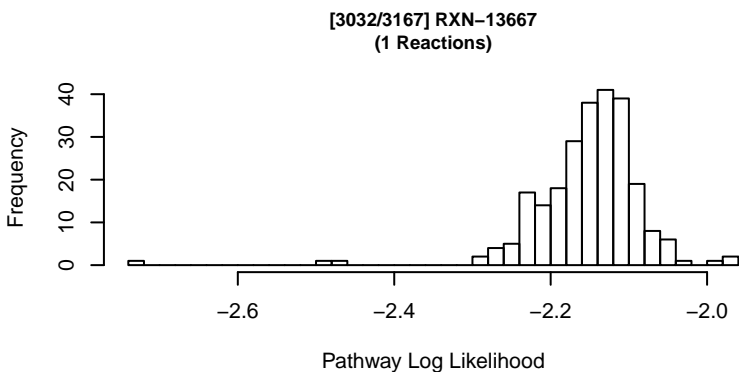
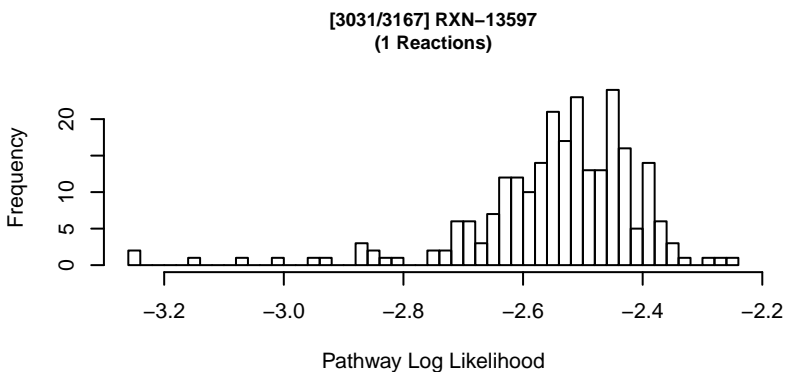
Missing ALL Reaction(s) from Pathway.

[3029/3167] RXN-13406
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

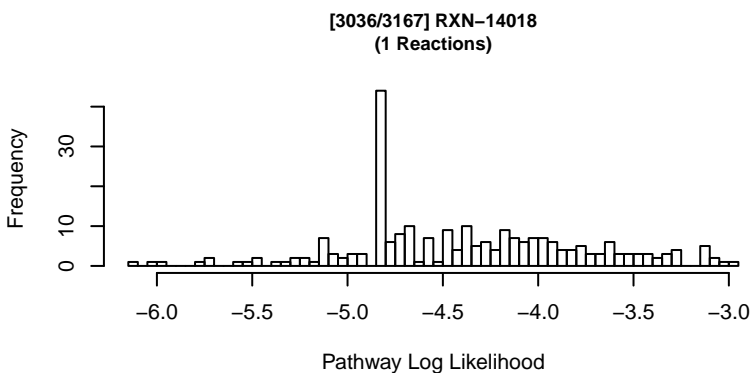
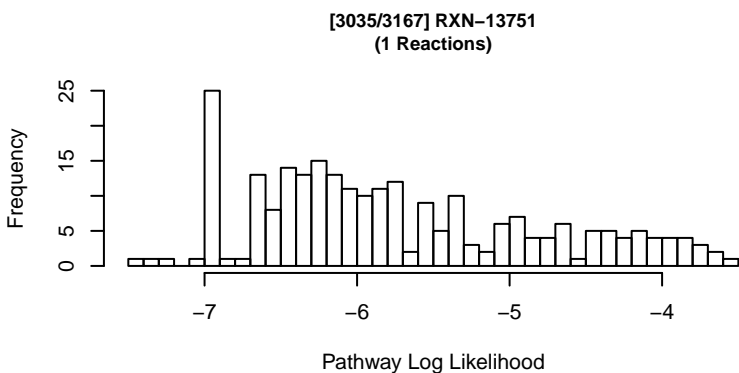
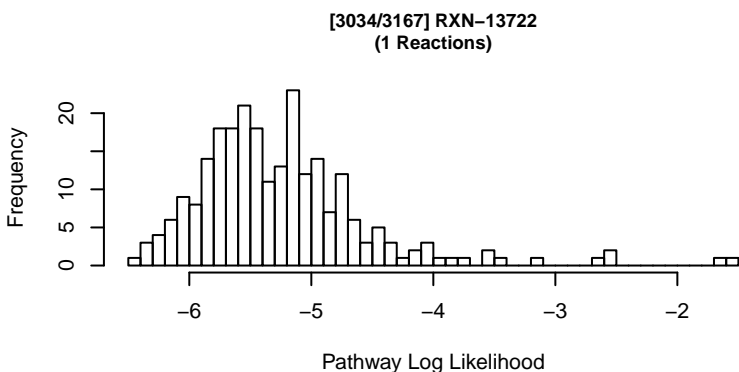
[3030/3167] RXN-13484
(2 Reactions)

Missing 1 Reaction(s) from Pathway.



[3033/3167] RXN-13717
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[3037/3167] RXN-14024
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[3038/3167] RXN-14198
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3039/3167] RXN-14200
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

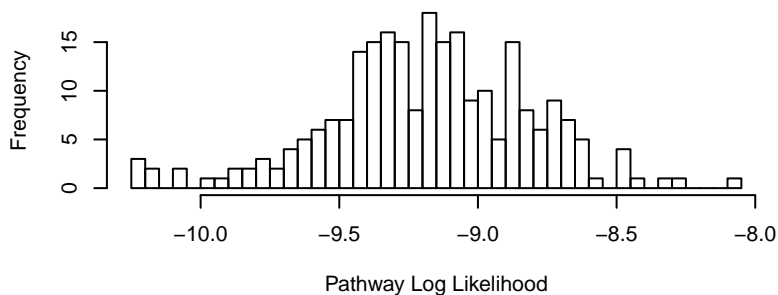
[3040/3167] RXN-14201
(9 Reactions)

Missing 3 Reaction(s) from Pathway.

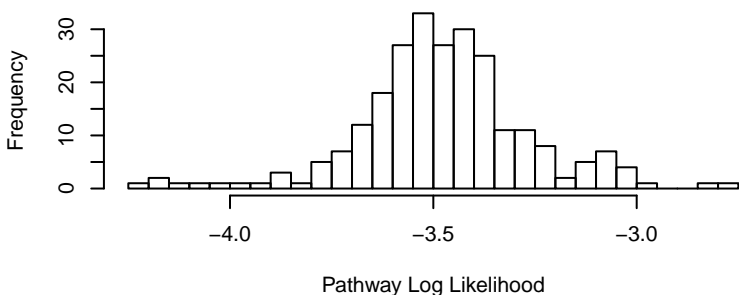
[3041/3167] RXN-14205
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[3042/3167] RXN-14246
(2 Reactions)



[3043/3167] RXN-14249
(1 Reactions)



[3044/3167] RXN-14306
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3045/3167] RXN-14431
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway

[3046/3167] RXN-14599
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[3047/3167] RXN-14616
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3048/3167] RXN-14617
(1 Reactions)

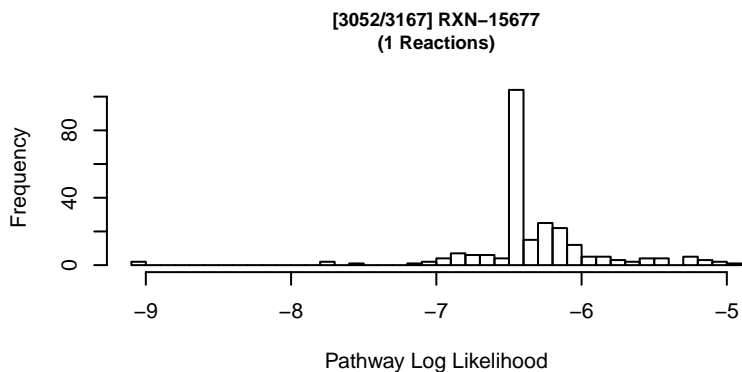
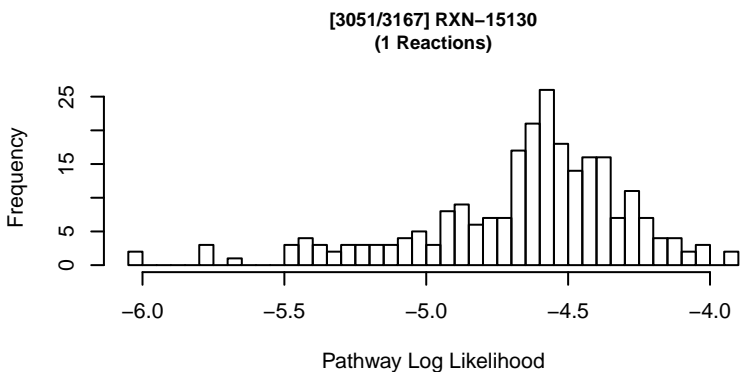
Missing ALL Reaction(s) from Pathway.

[3049/3167] RXN-14630
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

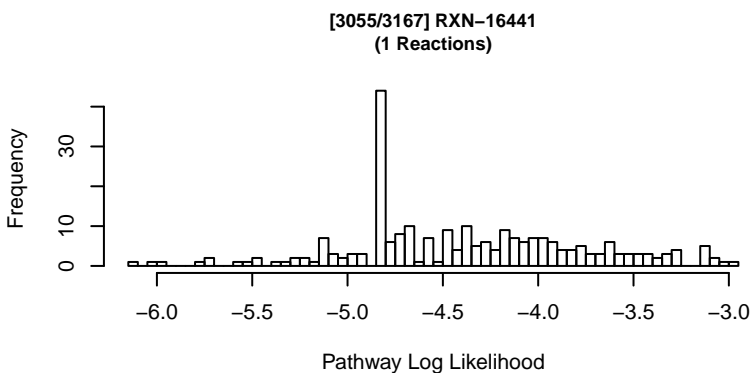
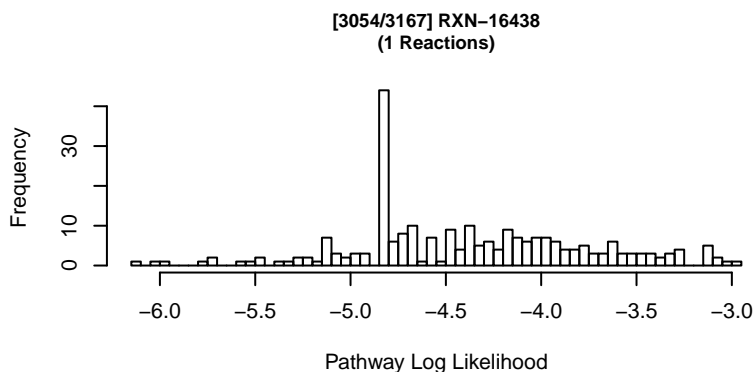
[3050/3167] RXN-14638
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[3053/3167] RXN-16302
(1 Reactions)

Missing ALL Reaction(s) from Pathway.



[3056/3167] RXN-17120
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3057/3167] RXN-17121
(1 Reactions)

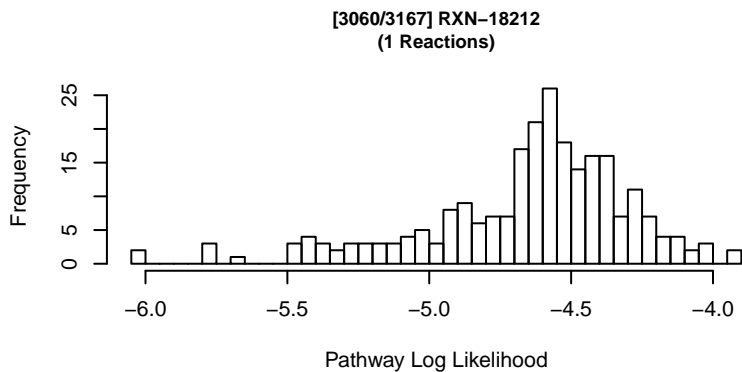
Missing ALL Reaction(s) from Pathway.

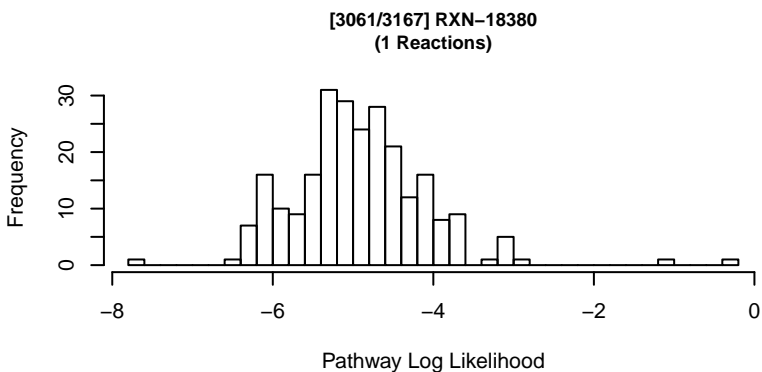
[3058/3167] RXN-18096
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[3059/3167] RXN-18155
(2 Reactions)

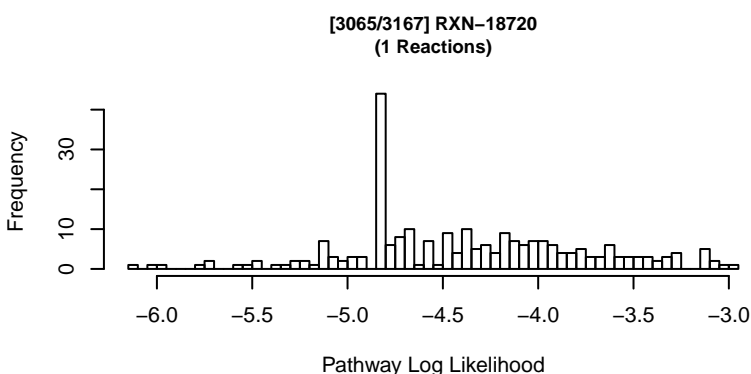
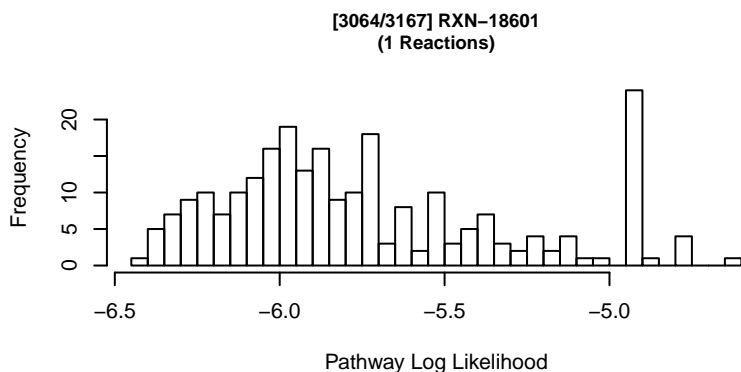
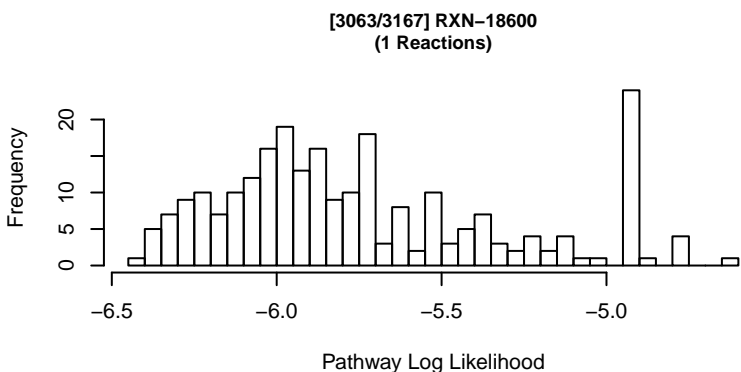
Missing ALL Reaction(s) from Pathway.





[3062/3167] RXN-18385
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

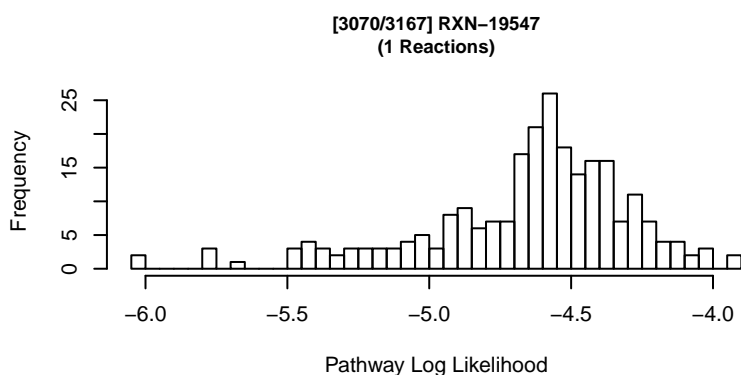
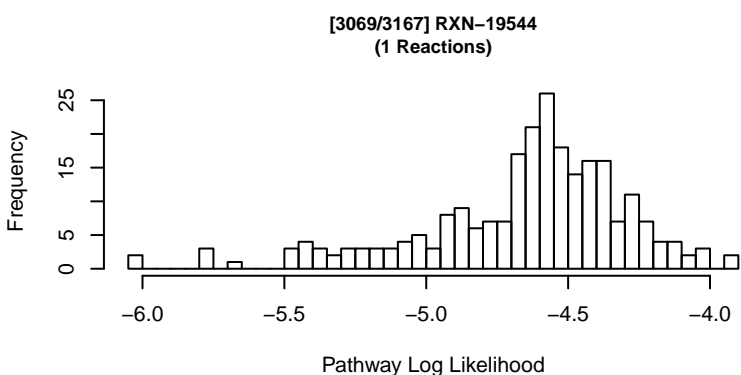
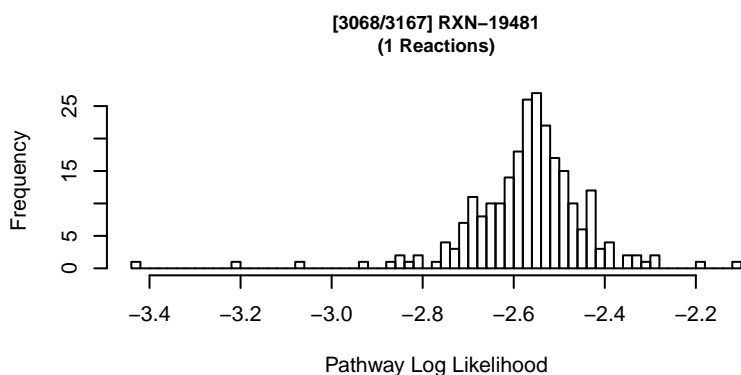


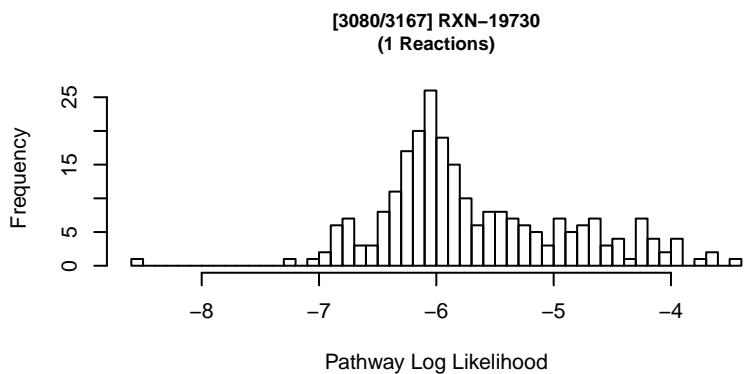
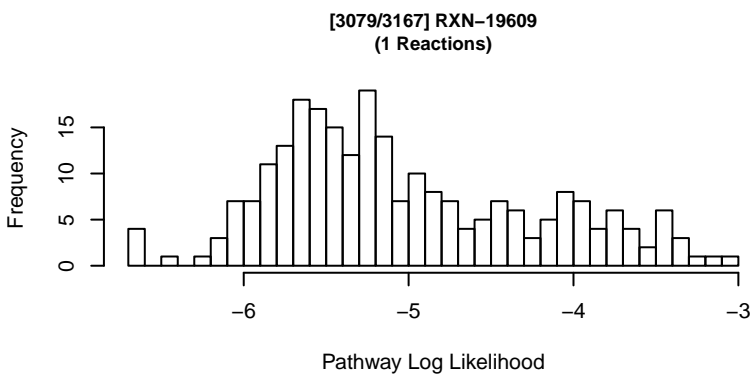
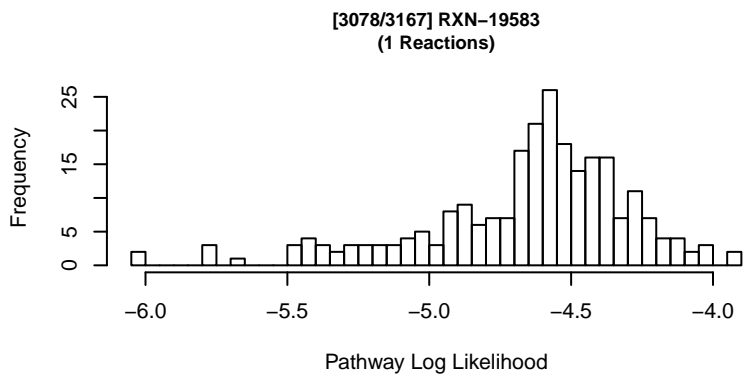
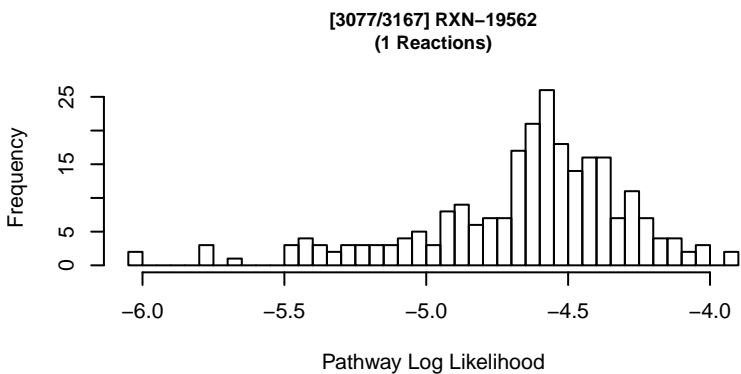
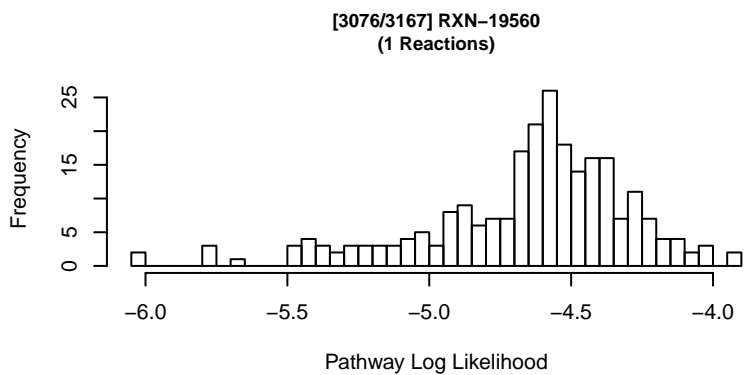
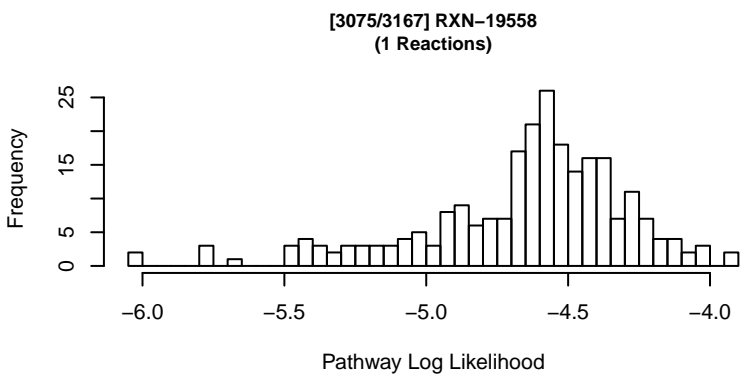
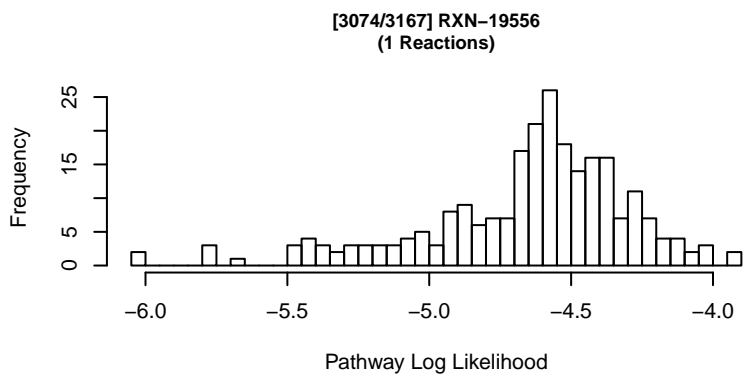
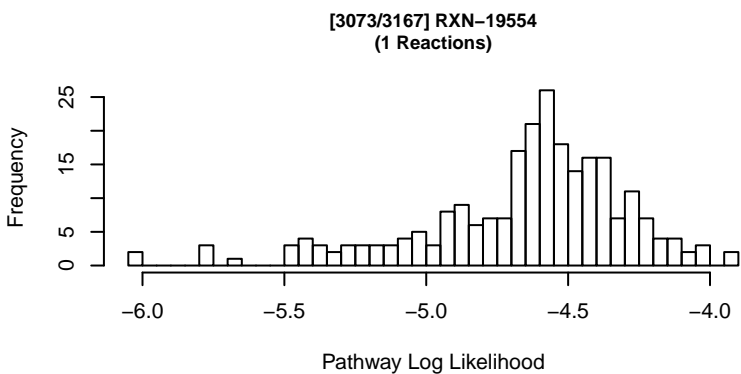
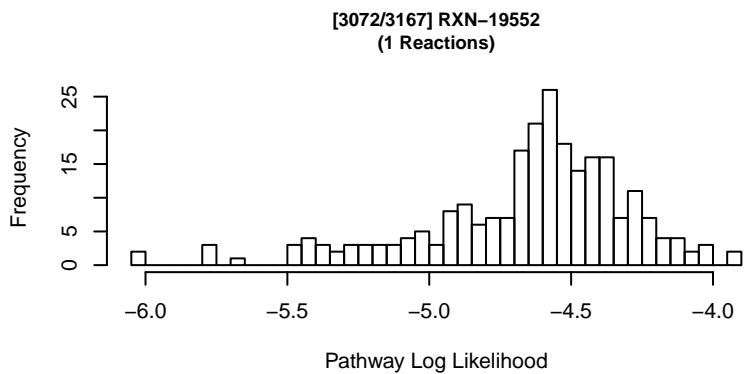
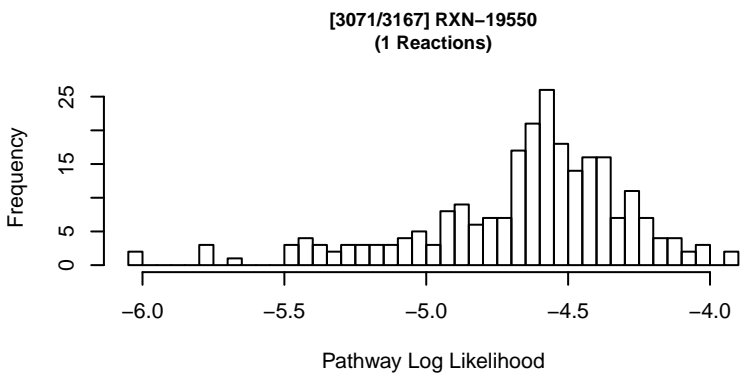
[3066/3167] RXN-18794
(1 Reactions)

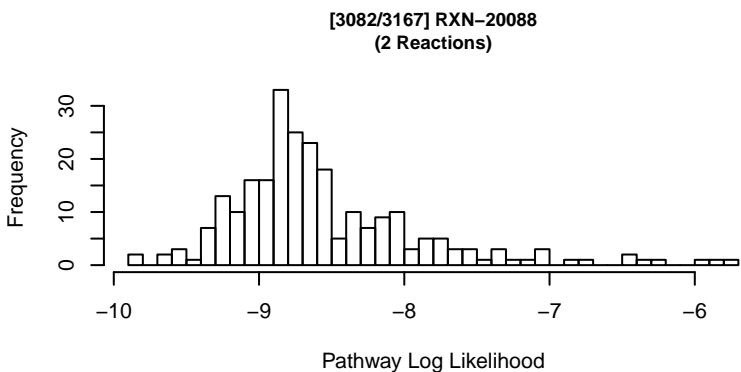
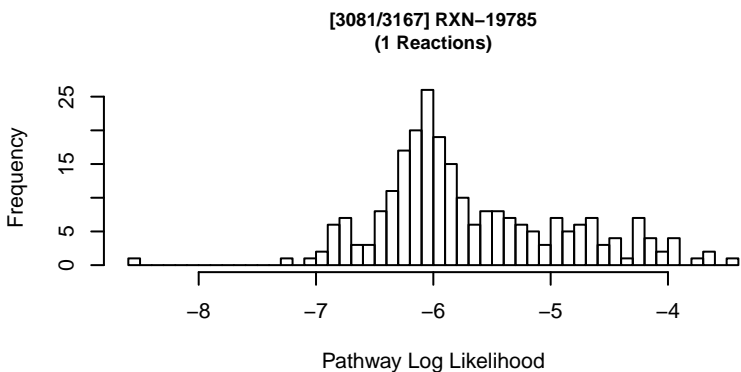
Missing ALL Reaction(s) from Pathway.

[3067/3167] RXN-18856
(2 Reactions)

Missing ALL Reaction(s) from Pathway.







[3083/3167] RXN-20302
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3084/3167] RXN-20616
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3085/3167] RXN-20617
(2 Reactions)

Missing ALL Reaction(s) from Pathway.

[3086/3167] RXN-20618
(1 Reactions)

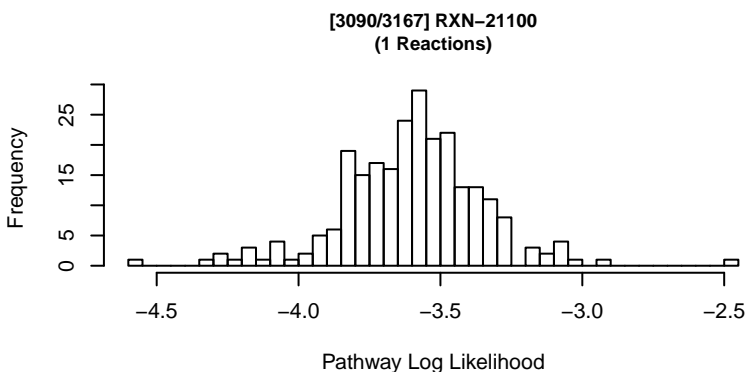
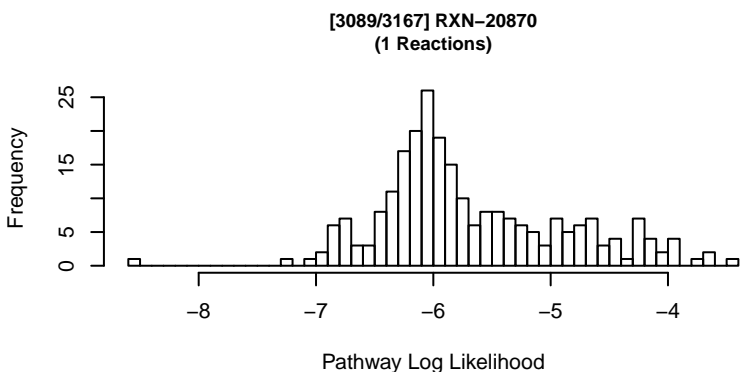
Missing ALL Reaction(s) from Pathway.

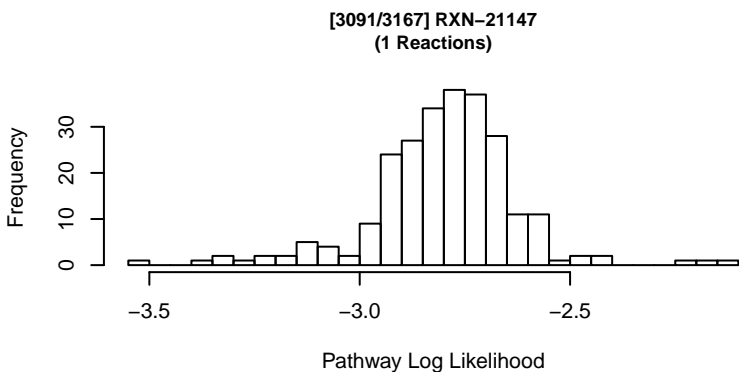
[3087/3167] RXN-20766
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3088/3167] RXN-20768
(1 Reactions)

Zeros/-Inf for reaction(s) in Pathway





[3092/3167] RXN-21594
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3093/3167] RXN-21595
(1 Reactions)

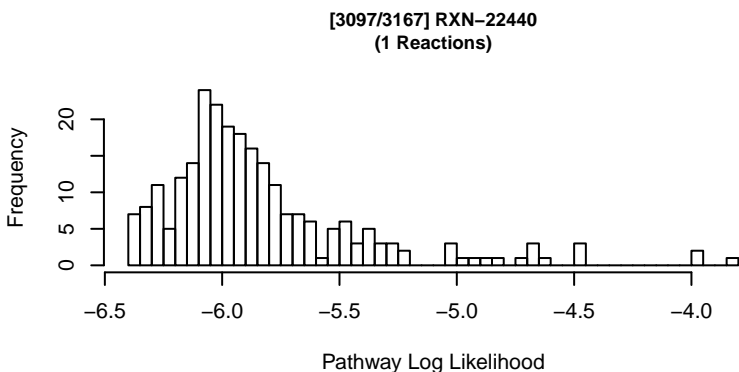
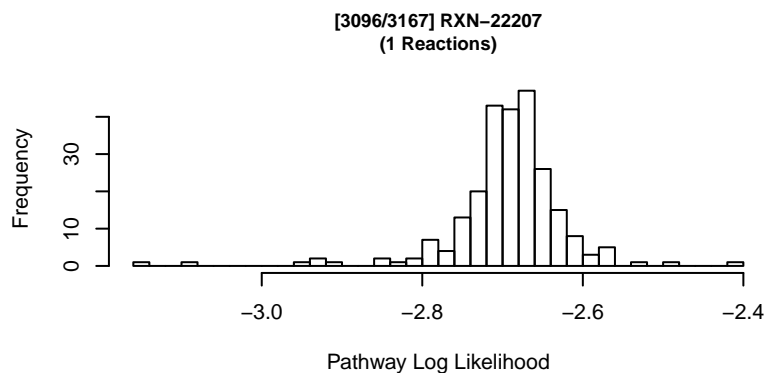
Missing ALL Reaction(s) from Pathway.

[3094/3167] RXN-21596
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

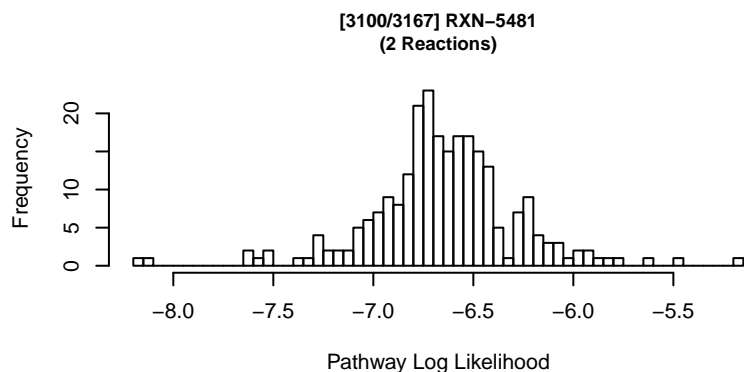
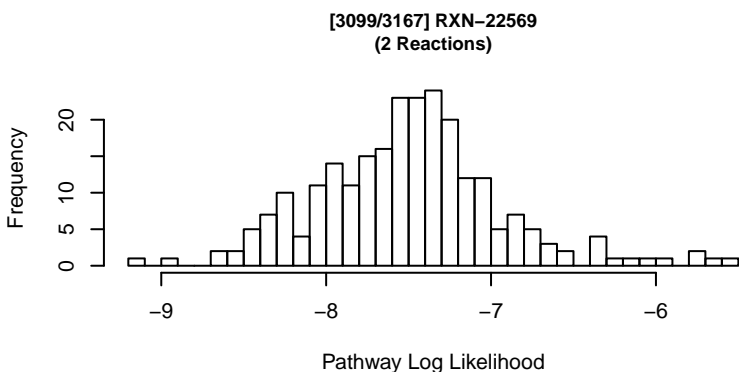
[3095/3167] RXN-21597
(2 Reactions)

Missing ALL Reaction(s) from Pathway.



[3098/3167] RXN-22566
(3 Reactions)

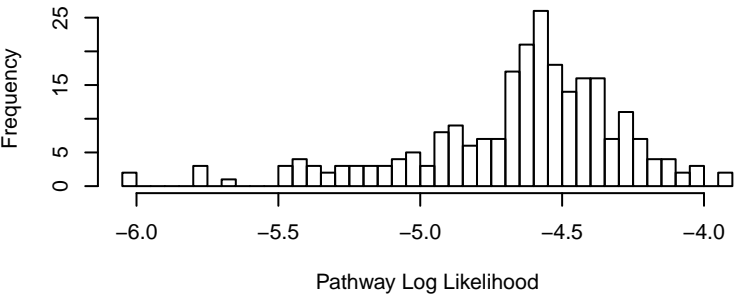
Zeros/-Inf for reaction(s) in Pathway



[3101/3167] RXN-5482
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[3102/3167] RXN-6763
(1 Reactions)



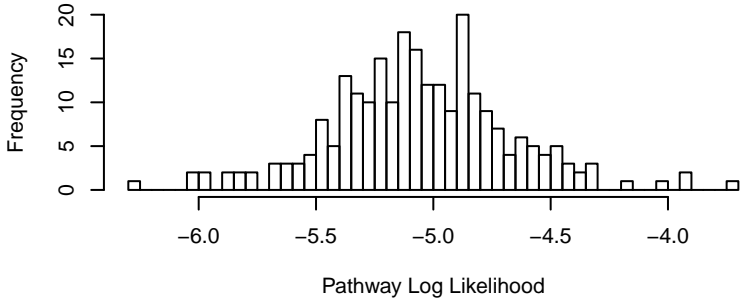
[3103/3167] RXN-7782
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3104/3167] RXN-8853
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

[3105/3167] RXN-8890
(1 Reactions)



[3106/3167] RXN-8968
(3 Reactions)

Zeros/-Inf for reaction(s) in Pathway

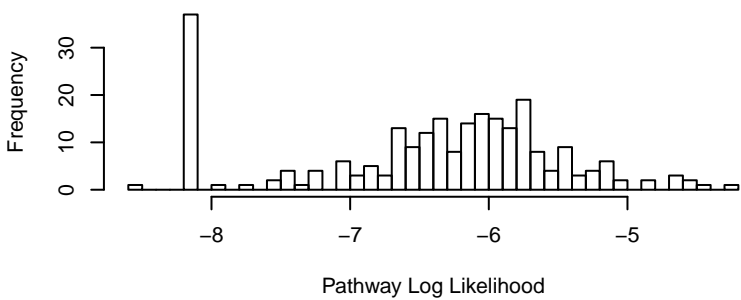
[3107/3167] RXN-9374
(4 Reactions)

Missing 3 Reaction(s) from Pathway.

[3108/3167] RXN0-1661
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[3109/3167] RXN0-2022
(1 Reactions)



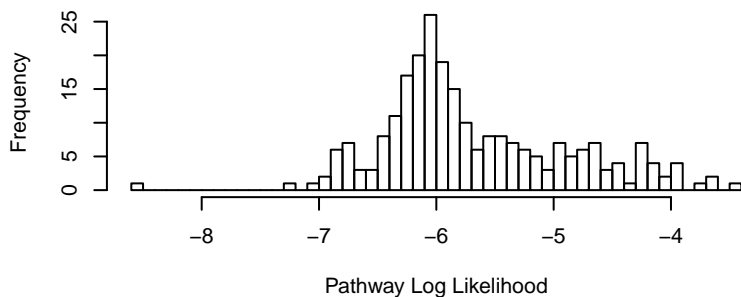
[3110/3167] RXN0-6511
(2 Reactions)

Zeros/-Inf for reaction(s) in Pathway

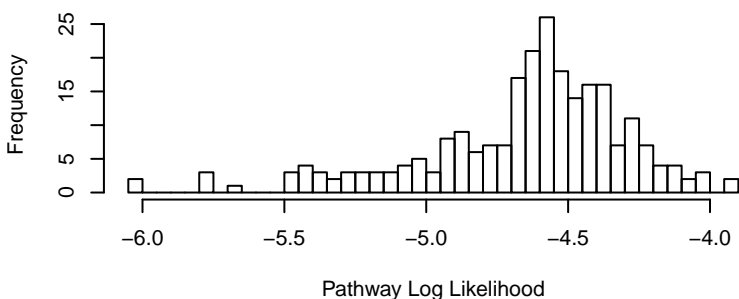
[3111/3167] RXN0-6555
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

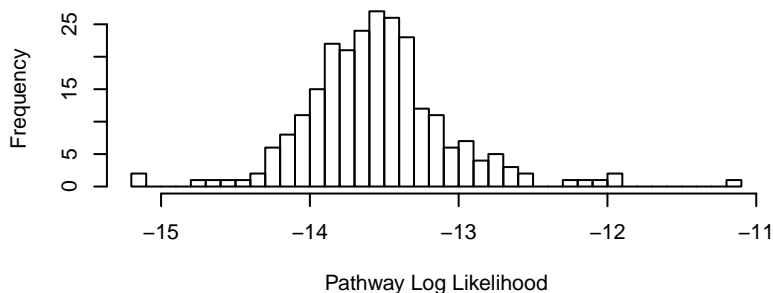
[3112/3167] RXN66-2
(1 Reactions)



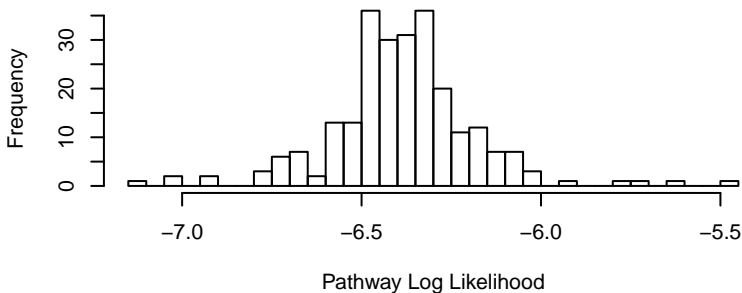
[3113/3167] S-ALKYLCYSTEINE-LYASE-RXN
(1 Reactions)



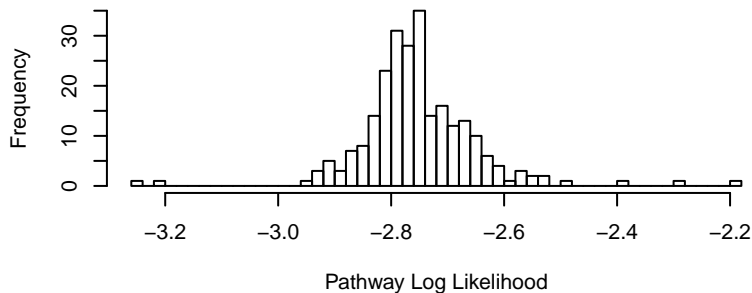
[3114/3167] SALVADEHYPOX-PWY
adenosine nucleotides degradation II
(4 Reactions)



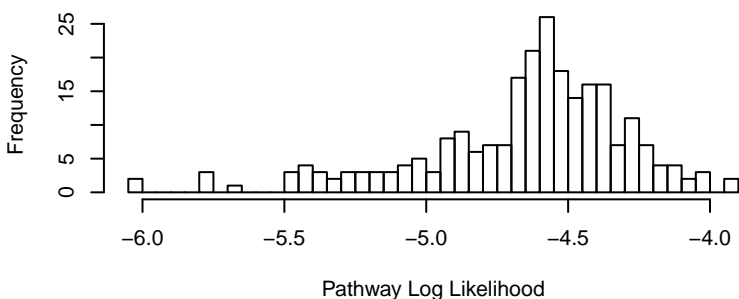
[3115/3167] SALVPURINE2-PWY
xanthine and xanthosine salvage
(2 Reactions)



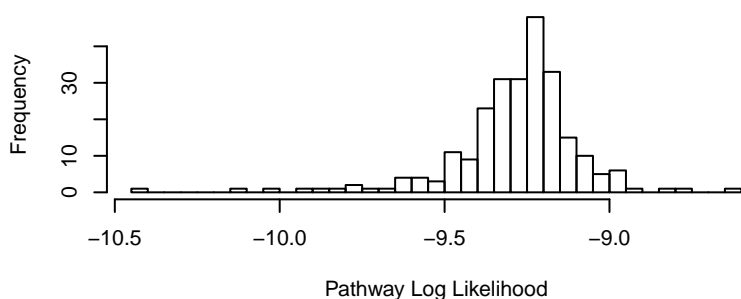
[3116/3167] SAM-PWY
S-adenosyl-L-methionine biosynthesis
(1 Reactions)



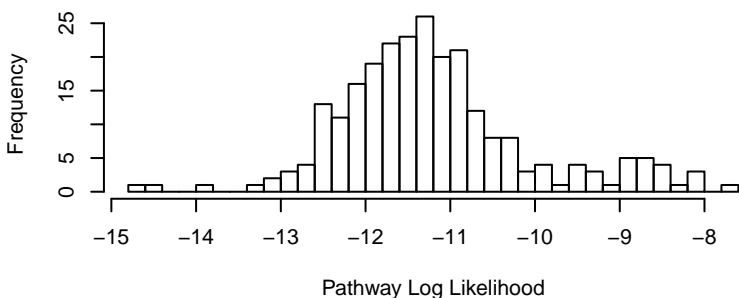
[3117/3167] SERDEG-PWY
L-serine degradation
(1 Reactions)



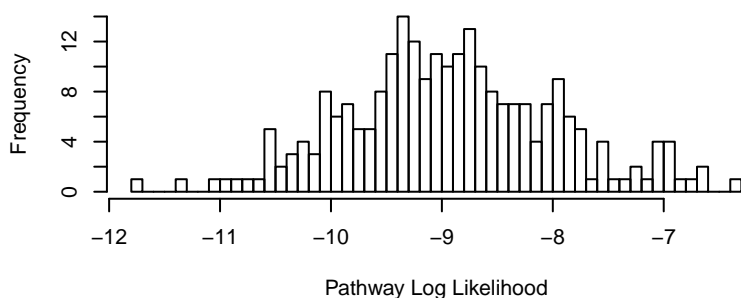
[3118/3167] SERSYN-PWY
L-serine biosynthesis I
(3 Reactions)



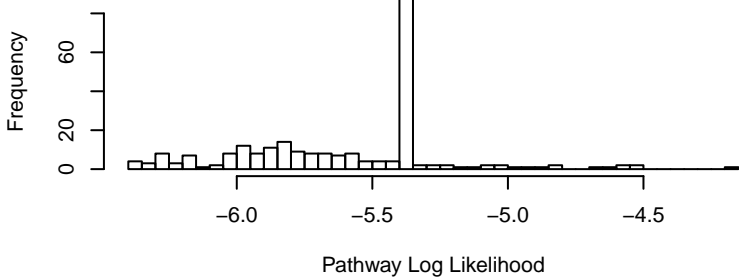
[3119/3167] SHIKIMATEDEG-PWY
shikimate degradation I
(2 Reactions)



[3120/3167] SO4ASSIM-PWY
assimilatory sulfate reduction I
(2 Reactions)



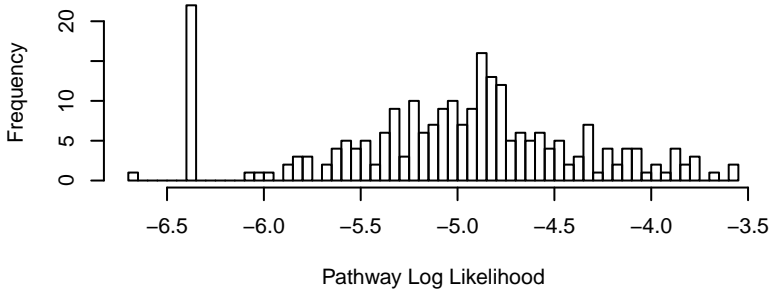
[3121/3167] SOPHOROSYLOXYDOCOSANOATE-DEG-PWY
sophorosyloxydocosanoate deacetylation
(1 Reactions)



[3122/3167] SOPHOROSYLOXYDOCOSANOATE-SYN-PWY
sophorolipid biosynthesis
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[3123/3167] SORBDEG-PWY
D-sorbitol degradation II
(1 Reactions)



[3124/3167] SPHINGOLIPID-SYN-PWY
sphingolipid biosynthesis (yeast)
(8 Reactions)

Missing 6 Reaction(s) from Pathway.

[3125/3167] SUCROSEUTIL2-PWY
sucrose degradation VII (sucrose 3-dehydrogenase)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[3126/3167] SUCSYN-PWY
sucrose biosynthesis I (from photosynthesis)
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

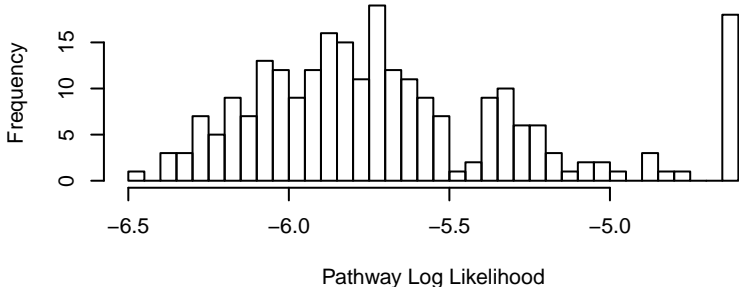
[3127/3167] SUCUTIL-PWY
sucrose degradation I (sucrose phosphotransferase)
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[3128/3167] SULFMETII-PWY
assimilatory sulfate reduction II
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[3129/3167] TAURINEDEG-PWY
taurine degradation III
(1 Reactions)



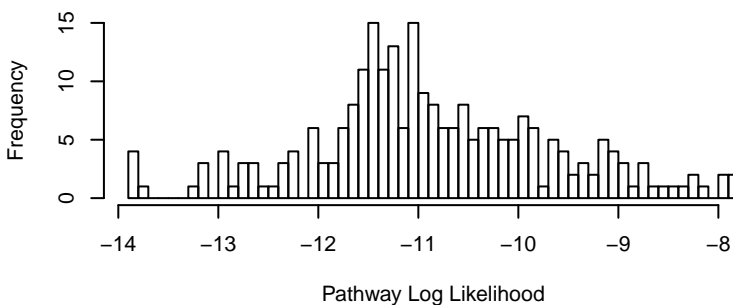
[3130/3167] TCA
TCA cycle I (prokaryotic)
(9 Reactions)

Missing 1 Reaction(s) from Pathway.

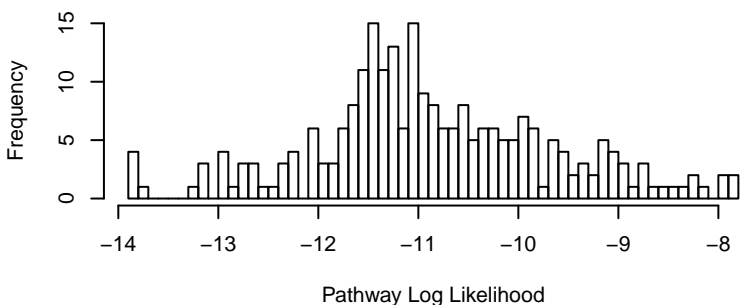
[3131/3167] TCA-1
TCA cycle VIII (Chlamydia)
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[3132/3167] TECH1REDHAL-RXN
(2 Reactions)



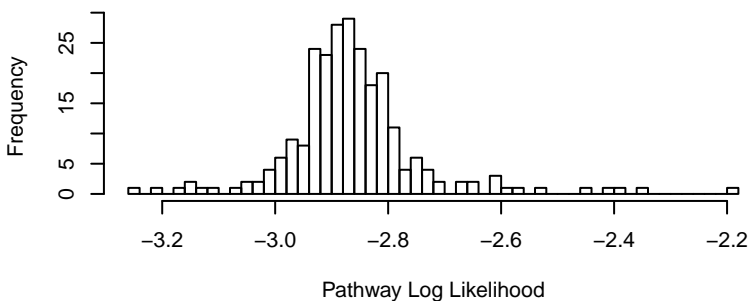
[3133/3167] TECH2REDHAL-RXN
(2 Reactions)



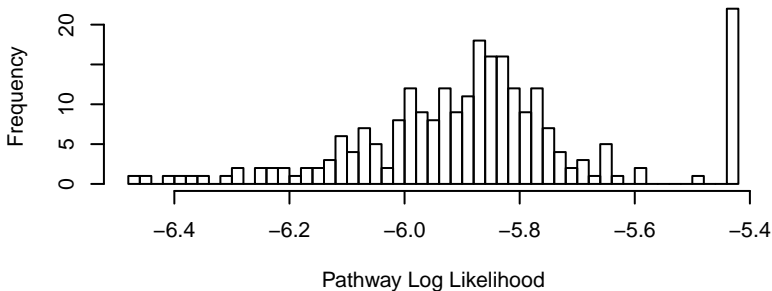
[3134/3167] TEICHOICACID-PWY
poly(glycerol phosphate) wall teichoic acid biosynthesis
(12 Reactions)

Missing 5 Reaction(s) from Pathway.

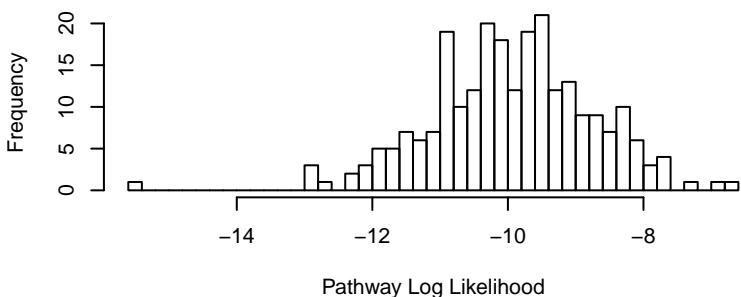
[3135/3167] THIOREDOX-PWY
thioredoxin pathway
(1 Reactions)



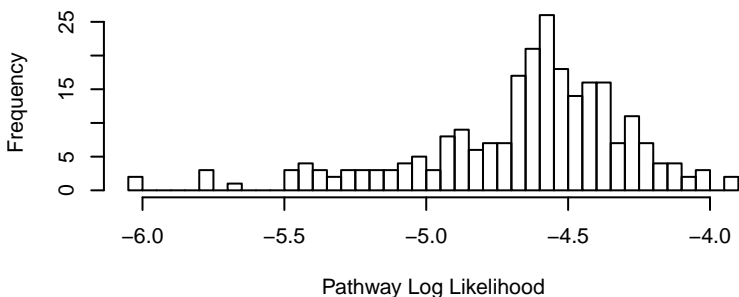
[3136/3167] THIOSULFOX-PWY
thiosulfate oxidation I (to tetrathionate)
(1 Reactions)



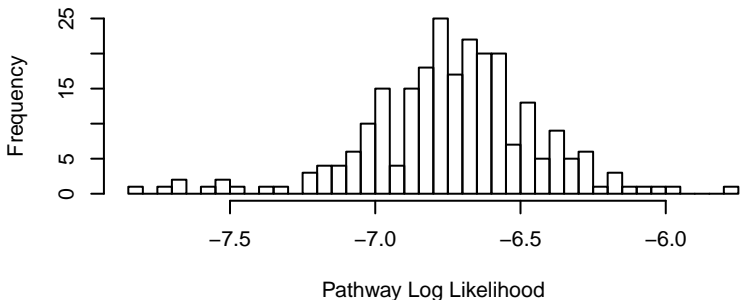
[3137/3167] THRDLCAT-PWY
L-threonine degradation III (to methylglyoxal)
(2 Reactions)



[3138/3167] THREDEHYD-RXN
(1 Reactions)



[3139/3167] THREONINE-DEG2-PWY
L-threonine degradation II
(2 Reactions)



[3140/3167] TOLSULFDEG-PWY
4-toluenesulfonate degradation I
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

[3141/3167] TOLUENE-DEG-2-OH-PWY
toluene degradation to 2-hydroxypentadienoate I (<l>via</l> <i>o</i>-l>-cresol)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

[3142/3167] TOLUENE-DEG-3-OH-PWY
toluene degradation II (aerobic) (<l>via 4-methylcatechol</l>)
(5 Reactions)

Missing 2 Reaction(s) from Pathway.

[3143/3167] TOLUENE-DEG-4-OH-PWY
toluene degradation to 4-methylphenol
(1 Reactions)

Missing ALL Reaction(s) from Pathway.

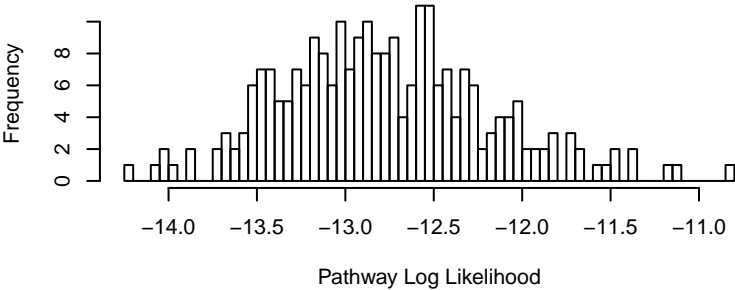
[3144/3167] TOLUENE-DEG-CATECHOL-PWY
toluene degradation to benzoate
(3 Reactions)

Missing 1 Reaction(s) from Pathway.

[3145/3167] TOLUENE-DEG-DIOL-PWY
toluene degradation to 2-hydroxypentadienoate (<l>via</l> toluene-<l>cis</l>-diol)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

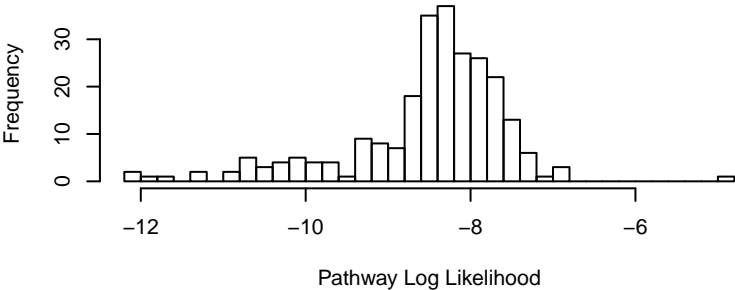
[3146/3167] TREDEGLOW-PWY
trehalose degradation I (low osmolarity)
(3 Reactions)



[3147/3167] TREHALOSESYN-PWY
trehalose biosynthesis III
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

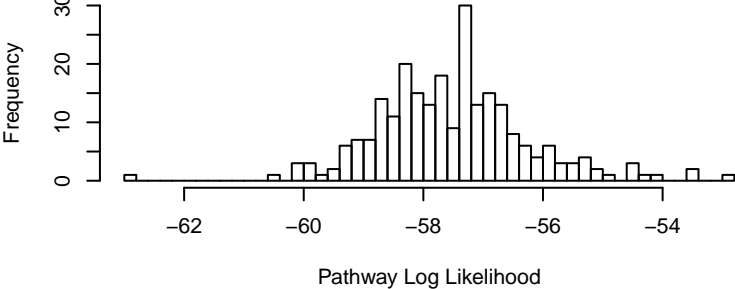
[3148/3167] TRESYN-PWY
trehalose biosynthesis I
(2 Reactions)



[3149/3167] TRIGLSYN-PWY
diacylglycerol and triacylglycerol biosynthesis
(7 Reactions)

Missing 1 Reaction(s) from Pathway.

[3150/3167] TRNA-CHARGING-PWY
tRNA charging
(21 Reactions)



[3151/3167] TRPCAT-PWY
L-tryptophan degradation I (via anthranilate)
(4 Reactions)

Missing 1 Reaction(s) from Pathway.

[3152/3167] TRPIAACAT-PWY
indole-3-acetate biosynthesis VI (bacteria)
(4 Reactions)

Missing 2 Reaction(s) from Pathway.

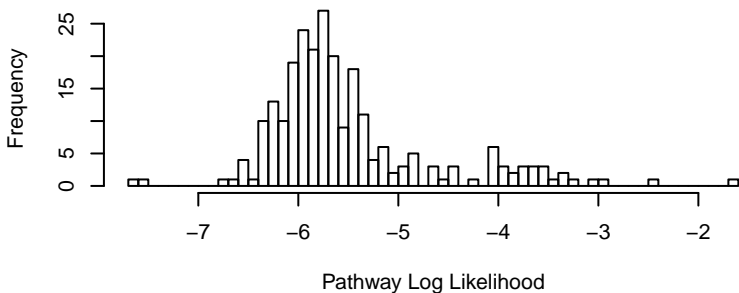
[3153/3167] TRPKYNCAT-PWY
L-tryptophan degradation IV (via indole-3-lactate)
(3 Reactions)

Missing 2 Reaction(s) from Pathway.

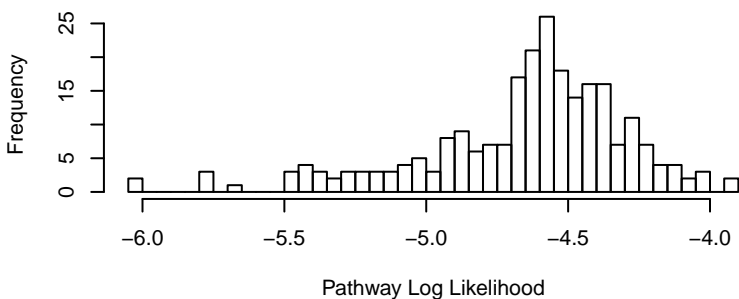
[3154/3167] TRPSYN-PWY
L-tryptophan biosynthesis
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[3155/3167] TRYPANOSYN-PWY
trypanothione biosynthesis
(1 Reactions)



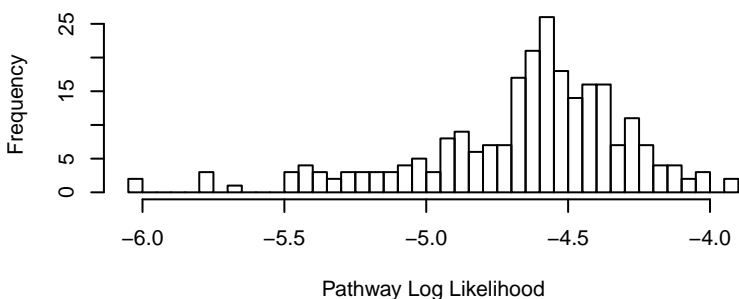
[3156/3167] TRYPDEG-PWY
L-tryptophan degradation II (via pyruvate)
(1 Reactions)



[3157/3167] TRYPSYN-RXN
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[3158/3167] TRYPTOPHAN-RXN
(1 Reactions)



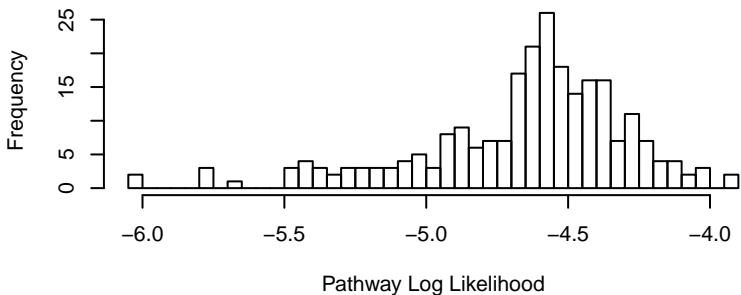
[3159/3167] TYRFUMCAT-PWY
L-tyrosine degradation I
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[3160/3167] TYROSINE-23-AMINOMUTASE-RXN
(2 Reactions)

Missing 1 Reaction(s) from Pathway.

[3161/3167] TYROSINE-PHENOL-LYASE-RXN
(1 Reactions)



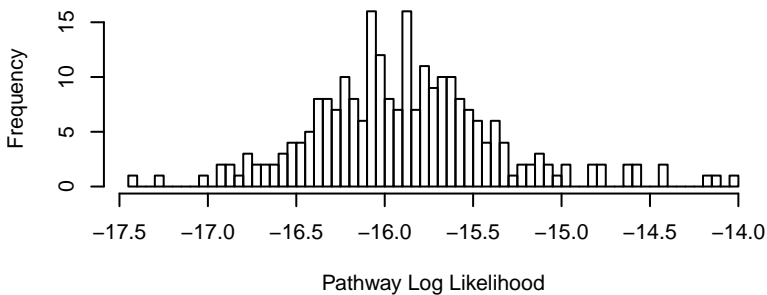
[3162/3167] TYRSYN
L-tyrosine biosynthesis I
(6 Reactions)

Missing 1 Reaction(s) from Pathway.

[3163/3167] UDPNACETYLGALSYN-PWY
UDP-acetyl-D-glucosamine biosynthesis II
(7 Reactions)

Zeros/-Inf for reaction(s) in Pathway

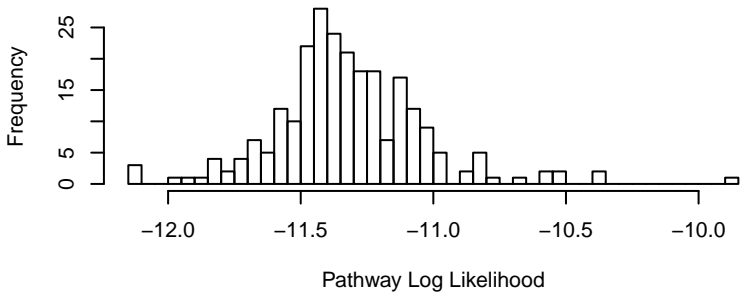
[3164/3167] UDPNAGSYN-PWY
UDP-acetyl-D-glucosamine biosynthesis I
(5 Reactions)



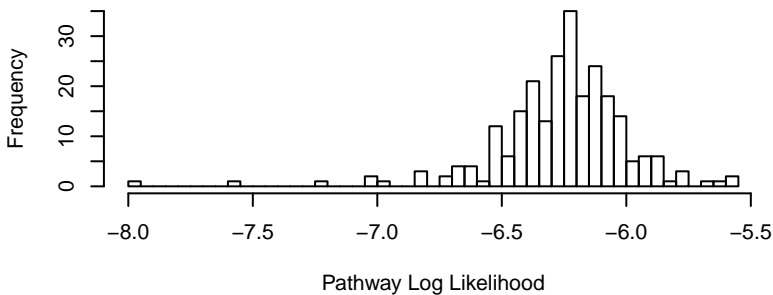
[3165/3167] VALDEG-PWY
L-valine degradation I
(8 Reactions)

Missing 1 Reaction(s) from Pathway.

[3166/3167] VALSYN-PWY
L-valine biosynthesis
(4 Reactions)



[3167/3167] XYLCAT-PWY
D-xylose degradation I
(2 Reactions)



Distribution of Fullfilled Pathway Lengths

