
Group
Cancer
Normal
0.04
0.03
0.02
0.01
0
HISDEG−PWY: L−histidine degradation I
PWY−5981: CDP−diacylglycerol biosynthesis III
P163−PWY: L−lysine fermentation to acetate and butanoate
PWY−6305: superpathway of putrescine biosynthesis
PWY−6519: 8−amino−7−oxononanoate biosynthesis I
PWY−6922: L−Nδ−acetylornithine biosynthesis
P185−PWY: formaldehyde assimilation III (dihydroxyacetone cycle)
ARGININE−SYN4−PWY: L−ornithine biosynthesis II
CITRULBIO−PWY: L−citrulline biosynthesis
PWY−5989: stearate biosynthesis II (bacteria and plants)
PWY−7560: methylerythritol phosphate pathway II
UDPNAGSYN−PWY: UDP−N−acetyl−D−glucosamine biosynthesis I
NAGLIPASYN−PWY: lipid IVA biosynthesis (E. coli)
PWY−8073: lipid IVA biosynthesis (P. putida)
PWY0−862: (5Z)−dodecenoate biosynthesis I
PWY−7664: oleate biosynthesis IV (anaerobic)
FASYN−ELONG−PWY: fatty acid elongation −− saturated
PWY−6282: palmitoleate biosynthesis I (from (5Z)−dodec−5−enoate)
PWY−5686: UMP biosynthesis I
PWY−6609: adenine and adenosine salvage III
ANAEROFRUCAT−PWY: homolactic fermentation
GLYCOLYSIS: glycolysis I (from glucose 6−phosphate)
PWY−5484: glycolysis II (from fructose 6−phosphate)
PWY−7851: coenzyme A biosynthesis II (eukaryotic)
TRNA−CHARGING−PWY: tRNA charging
PWY−2942: L−lysine biosynthesis III
THRESYN−PWY: superpathway of L−threonine biosynthesis
COMPLETE−ARO−PWY: superpathway of aromatic amino acid biosynthesis
PWY−5695: inosine 5'−phosphate degradation
PWY66−429: fatty acid biosynthesis initiation (mitochondria)
PWY−6386: UDP−N−acetylmuramoyl−pentapeptide biosynthesis II (lysine−containing)
PWY−6385: peptidoglycan biosynthesis III (mycobacteria)
PWY−6387: UDP−N−acetylmuramoyl−pentapeptide biosynthesis I (meso−diaminopimelate containing)
ANAGLYCOLYSIS−PWY: glycolysis III (from glucose)
CALVIN−PWY: Calvin−Benson−Bassham cycle
NONOXIPENT−PWY: pentose phosphate pathway (non−oxidative branch) I
PWY−8178: pentose phosphate pathway (non−oxidative branch) II
COA−PWY−1: superpathway of coenzyme A biosynthesis III (mammals)
HEMESYN2−PWY: heme b biosynthesis II (oxygen−independent)
HEME−BIOSYNTHESIS−II: heme b biosynthesis I (aerobic)
PWY−6147: 6−hydroxymethyl−dihydropterin diphosphate biosynthesis I
PANTO−PWY: phosphopantothenate biosynthesis I
PWY−5973: cis−vaccenate biosynthesis
PWY−7663: gondoate biosynthesis (anaerobic)
PWY−1042: glycolysis IV
PWY−6700: queuosine biosynthesis I (de novo)
GLUCONEO−PWY: gluconeogenesis I
NONMEVIPP−PWY: methylerythritol phosphate pathway I
"GLCMANNANAUT−PWY: superpathway of N−acetylglucosamine, N−acetylmannosamine and N−acetylneuraminate degradation"
PWY−6936: seleno−amino acid biosynthesis (plants)
GLYCOGENSYNTH−PWY: glycogen biosynthesis I (from ADP−D−Glucose)
P41−PWY: pyruvate fermentation to acetate and (S)−lactate I
PWY−5100: pyruvate fermentation to acetate and lactate II
PHOSLIPSYN−PWY: superpathway of phospholipid biosynthesis I (bacteria)
PWY4FS−7: phosphatidylglycerol biosynthesis I (plastidic)
PWY4FS−8: phosphatidylglycerol biosynthesis II (non−plastidic)
PWY−5913: partial TCA cycle (obligate autotrophs)
ARGSYNBSUB−PWY: L−arginine biosynthesis II (acetyl cycle)
PWY−6803: phosphatidylcholine acyl editing
DAPLYSINESYN−PWY: L−lysine biosynthesis I
PWY−5097: L−lysine biosynthesis VI
PWY−2941: L−lysine biosynthesis II
PWY−6628: superpathway of L−phenylalanine biosynthesis
PWY−702: L−methionine biosynthesis II
PWY−5941: glycogen degradation II
PWY−7238: sucrose biosynthesis II
PWY0−1586: peptidoglycan maturation (meso−diaminopimelate containing)
RIBOSYN2−PWY: flavin biosynthesis I (bacteria and plants)
PWY−5188: tetrapyrrole biosynthesis I (from glutamate)
BRANCHED−CHAIN−AA−SYN−PWY: superpathway of branched chain amino acid biosynthesis
ILEUSYN−PWY: L−isoleucine biosynthesis I (from threonine)
PWY−5103: L−isoleucine biosynthesis III
VALSYN−PWY: L−valine biosynthesis
PWY−1269: CMP−3−deoxy−D−manno−octulosonate biosynthesis
HSERMETANA−PWY: L−methionine biosynthesis III
PWY0−1241: ADP−L−glycero−β−D−manno−heptose biosynthesis
PWY0−1261: anhydromuropeptides recycling I
FERMENTATION−PWY: mixed acid fermentation
METSYN−PWY: superpathway of L−homoserine and L−methionine biosynthesis
PWY−8004: Entner−Doudoroff pathway I
HOMOSER−METSYN−PWY: L−methionine biosynthesis I
PWY−5154: L−arginine biosynthesis III (via N−acetyl−L−citrulline)
PWY−7282: 4−amino−2−methyl−5−diphosphomethylpyrimidine biosynthesis II
MET−SAM−PWY: superpathway of S−adenosyl−L−methionine biosynthesis
PWY−7400: L−arginine biosynthesis IV (archaebacteria)
PWY−7356: thiamine diphosphate salvage IV (yeast)
PWY−7204: pyridoxal 5'−phosphate salvage II (plants)
PWY−5920: superpathway of heme b biosynthesis from glycine
PWY−5347: superpathway of L−methionine biosynthesis (transsulfuration)
"PWY−241: C4 photosynthetic carbon assimilation cycle, NADP−ME type"
P164−PWY: purine nucleobases degradation I (anaerobic)
GLYCOLYSIS−E−D: superpathway of glycolysis and the Entner−Doudoroff pathway
GLUTORN−PWY: L−ornithine biosynthesis I
ARGSYN−PWY: L−arginine biosynthesis I (via L−ornithine)
FUCCAT−PWY: fucose degradation
PWY0−1061: superpathway of L−alanine biosynthesis
PYRIDOXSYN−PWY: pyridoxal 5'−phosphate biosynthesis I
PWY−841: superpathway of purine nucleotides de novo biosynthesis I
PENTOSE−P−PWY: pentose phosphate pathway
PWY0−1479: tRNA processing
PWY−7197: pyrimidine deoxyribonucleotide phosphorylation
PWY−6630: superpathway of L−tyrosine biosynthesis
"PWY−7115: C4 photosynthetic carbon assimilation cycle, NAD−ME type"
PWY0−845: superpathway of pyridoxal 5'−phosphate biosynthesis and salvage
PWY−I9: L−cysteine biosynthesis VI (from L−methionine)
PWY−3001: superpathway of L−isoleucine biosynthesis I
PWY0−162: superpathway of pyrimidine ribonucleotides de novo biosynthesis
"PWY−724: superpathway of L−lysine, L−threonine and L−methionine biosynthesis II"
PWY66−399: gluconeogenesis III
PWY−7198: pyrimidine deoxyribonucleotides de novo biosynthesis IV
"PWY−7117: C4 photosynthetic carbon assimilation cycle, PEPCK type"
PWY−6823: molybdopterin biosynthesis
PWY−5899: superpathway of menaquinol−13 biosynthesis
PWY−5898: superpathway of menaquinol−12 biosynthesis
PWY−5897: superpathway of menaquinol−11 biosynthesis
P441−PWY: superpathway of N−acetylneuraminate degradation
P108−PWY: pyruvate fermentation to propanoate I
P42−PWY: incomplete reductive TCA cycle
"PWY−5837: 2−carboxy−1,4−naphthoquinol biosynthesis"
PWY−7345: superpathway of anaerobic sucrose degradation
"PWY−7383: anaerobic energy metabolism (invertebrates, cytosol)"
PWY−7883: anhydromuropeptides recycling II
COA−PWY: coenzyme A biosynthesis I (prokaryotic)
DTDPRHAMSYN−PWY: dTDP−β−L−rhamnose biosynthesis
PWY−6151: S−adenosyl−L−methionine salvage I
PWY−7234: inosine−5'−phosphate biosynthesis III
PWY−6123: inosine−5'−phosphate biosynthesis I
PWY−6124: inosine−5'−phosphate biosynthesis II
PWY−6121: 5−aminoimidazole ribonucleotide biosynthesis I
PWY−6122: 5−aminoimidazole ribonucleotide biosynthesis II
PWY−6277: superpathway of 5−aminoimidazole ribonucleotide biosynthesis
PWY−7221: guanosine ribonucleotides de novo biosynthesis
PWY−5667: CDP−diacylglycerol biosynthesis I
PWY0−1319: CDP−diacylglycerol biosynthesis II
PEPTIDOGLYCANSYN−PWY: peptidoglycan biosynthesis I (meso−diaminopimelate containing)
PWY−7953: UDP−N−acetylmuramoyl−pentapeptide biosynthesis III (meso−diaminopimelate containing)
ARO−PWY: chorismate biosynthesis I
PWY−6163: chorismate biosynthesis from 3−dehydroquinate
PWY−7199: pyrimidine deoxyribonucleosides salvage
PWY−7977: L−methionine biosynthesis IV
OANTIGEN−PWY: O−antigen building blocks biosynthesis (E. coli)
PWY−6317: D−galactose degradation I (Leloir pathway)
PWY−4041: γ−glutamyl cycle
PWY−5659: GDP−mannose biosynthesis
PWY−8187: L−arginine degradation XIII (reductive Stickland reaction)
SALVADEHYPOX−PWY: adenosine nucleotides degradation II
PWY66−389: phytol degradation
"P125−PWY: superpathway of (R,R)−butanediol biosynthesis"
PWY−5367: petroselinate biosynthesis
SO4ASSIM−PWY: assimilatory sulfate reduction I
PWY−5971: palmitate biosynthesis (type II fatty acid synthase)
PWY−6284: superpathway of unsaturated fatty acids biosynthesis (E. coli)
PWY0−1296: purine ribonucleosides degradation
PWY0−1297: superpathway of purine deoxyribonucleosides degradation
LACTOSECAT−PWY: lactose and galactose degradation I
P161−PWY: acetylene degradation (anaerobic)
PWY0−1477: ethanolamine utilization
LIPASYN−PWY: phospholipases
PWY−5855: ubiquinol−7 biosynthesis (early decarboxylation)
PWY−7111: pyruvate fermentation to isobutanol (engineered)
PWY−7858: (5Z)−dodecenoate biosynthesis II
PWY−5918: superpathway of heme b biosynthesis from glutamate
HEME−BIOSYNTHESIS−II−1: heme b biosynthesis V (aerobic)
PWY−5189: tetrapyrrole biosynthesis II (from glycine)
PYRIDNUCSYN−PWY: NAD de novo biosynthesis I (from aspartate)
PWY−7790: UMP biosynthesis II
PWY−7791: UMP biosynthesis III
PWY−5030: L−histidine degradation III
PWY−621: sucrose degradation III (sucrose invertase)
HISTSYN−PWY: L−histidine biosynthesis
PWY−6608: guanosine nucleotides degradation III
PWY−6703: preQ0 biosynthesis
THISYNARA−PWY: superpathway of thiamine diphosphate biosynthesis III (eukaryotes)
PWY−6897: thiamine diphosphate salvage II
PWY−7357: thiamine phosphate formation from pyrithiamine and oxythiamine (yeast)
GLUCOSE1PMETAB−PWY: glucose and glucose−1−phosphate degradation
PWY−5384: sucrose degradation IV (sucrose phosphorylase)
PWY−7220: adenosine deoxyribonucleotides de novo biosynthesis II
PWY−7222: guanosine deoxyribonucleotides de novo biosynthesis II
PWY−7208: superpathway of pyrimidine nucleobases salvage
PWY−6125: superpathway of guanosine nucleotides de novo biosynthesis II
PWY−7228: superpathway of guanosine nucleotides de novo biosynthesis I
PWY−6126: superpathway of adenosine nucleotides de novo biosynthesis II
PWY−7229: superpathway of adenosine nucleotides de novo biosynthesis I
ASPASN−PWY: superpathway of L−aspartate and L−asparagine biosynthesis
1CMET2−PWY: folate transformations III (E. coli)
PWY−3841: folate transformations II (plants)
PPGPPMET−PWY: ppGpp metabolism
SER−GLYSYN−PWY: superpathway of L−serine and glycine biosynthesis I
C2
N6
N1
C1
C6
C5
C4
N3
N4
N5