
ethanolamine degradation
L−cystathionine from O−succinyl−L−homoserine: step 1/1
cob(II)yrinate a,c−diamide from sirohydrochlorin (anaerobic route): step 4/10
1,2−propanediol degradation
Organosulfur degradation
5−amino−1−(5−phospho−D−ribosyl)imidazole from N(2)−formyl−N(1)−(5−phospho−D−ribosyl)glycinamide: step 1/2
L−proline biosynthesis
D−ribose degradation
D−ribulose 5−phosphate from D−glucose 6−phosphate (oxidative stage): step 2/3
pyruvate and succinate semialdehyde from 4−hydroxyphenylacetate: step 6/7
glycine from L−threonine: step 1/2
L−threonine from L−aspartate: step 5/5
sulfite from sulfate: step 3/3
capsule polysaccharide biosynthesis
pyridoxine 5'−phosphate biosynthesis
Entner−Doudoroff pathway
urate degradation
putrescine degradation
D−arabinitol metabolism
chorismate from D−erythrose 4−phosphate and phosphoenolpyruvate: step 1/7
UMP biosynthesis via salvage pathway
L−fucose metabolism
isopentenyl diphosphate from 1−deoxy−D−xylulose 5−phosphate: step 5/6
pyruvate and succinate semialdehyde from 4−hydroxyphenylacetate: step 3/7
lipopolysaccharide biosynthesis
protoporphyrin−IX biosynthesis
L−serine biosynthesis
galactarate degradation
precorrin−2 from uroporphyrinogen III: step 1/1
IMP from inosine: step 1/1
D−sorbitol degradation
N(1)−(5−phospho−D−ribosyl)glycinamide from 5−phospho−alpha−D−ribose 1−diphosphate: step 1/2
thiamine diphosphate biosynthesis
L−asparagine from L−aspartate (ammonia route): step 1/1
(S)−tetrahydrodipicolinate from L−aspartate: step 2/4
molybdopterin biosynthesis
cob(II)yrinate a,c−diamide from sirohydrochlorin (anaerobic route): step 3/10
2−dehydro−3−deoxy−D−gluconate degradation
carnitine metabolism
L−tryptophan biosynthesis
D−alanine biosynthesis
N(2)−acetyl−L−ornithine from L−glutamate: step 1/4
phenylacetate degradation
pyruvate from D−glyceraldehyde 3−phosphate: step 5/5
glutathione metabolism
propanoate degradation
peptidoglycan recycling
D−gluconate degradation [regulation]
5−amino−1−(5−phospho−D−ribosyl)imidazole from N(2)−formyl−N(1)−(5−phospho−D−ribosyl)glycinamide: step 2/2
DNA replication
heme O biosynthesis
betaine from betaine aldehyde: step 1/1
glycerophospholipid metabolism
XMP biosynthesis via salvage pathway
methylglyoxal degradation
pyruvate from D−glyceraldehyde 3−phosphate: step 1/5
oxidative phosphorylation
D−ribulose 5−phosphate from D−glucose 6−phosphate (oxidative stage): step 3/3
quercetin degradation
betaine biosynthesis via choline pathway
L−isoleucine biosynthesis
5−formamido−1−(5−phospho−D−ribosyl)imidazole−4−carboxamide from 5−amino−1−(5−phospho−D−ribosyl)imidazole−4−carboxamide (10−formyl THF route): step 1/1
oxaloacetate from (S)−malate (quinone route): step 1/1
NAD(+) biosynthesis [regulation]
sucrose metabolism
L−arginine degradation via AST pathway
NAD(+) biosynthesis
protoheme biosynthesis
ppGpp biosynthesis
osmoregulated periplasmic glucan (OPG) biosynthesis
L−phenylalanine biosynthesis
glycine from L−threonine: step 2/2
isocitrate from oxaloacetate: step 1/2
L−methionine biosynthesis via salvage pathway
IMP from hypoxanthine: step 1/1
L−glutamate degradation via mesaconate pathway
3−phenylpropanoate degradation
iron−sulfur cluster biosynthesis
enterobactin biosynthesis
pyruvate and succinate semialdehyde from 4−hydroxyphenylacetate: step 1/7
tetrahydrofolate biosynthesis
D−ribulose 5−phosphate from D−glucose 6−phosphate (oxidative stage): step 1/3
L−methionine from L−homocysteine (MetH route): step 1/1
glycerone phosphate from L−rhamnose: step 3/3
nitric oxide reduction
glycerone phosphate from L−rhamnose: step 1/3
L−lysine degradation via saccharopine pathway
L−threonine degradation via propanoate pathway
ubiquinone biosynthesis
taurine degradation via aerobic pathway
L−asparagine from L−aspartate (L−Gln route): step 1/1
KDO(2)−lipid A from CMP−3−deoxy−D−manno−octulosonate and lipid IV(A): step 1/4
CTP biosynthesis via salvage pathway
CDP−diacylglycerol biosynthesis
L−threonine from L−aspartate: step 4/5
L−cysteine biosynthesis
KDO(2)−lipid A from CMP−3−deoxy−D−manno−octulosonate and lipid IV(A): step 2/4
hydrogen sulfide from sulfite (NADPH route): step 1/1
phosphatidylglycerol from CDP−diacylglycerol: step 2/2
phosphatidylglycerol from CDP−diacylglycerol: step 1/2
O−succinyl−L−homoserine from L−homoserine: step 1/1
N(2)−acetyl−L−ornithine from L−glutamate: step 2/4
LL−2,6−diaminopimelate from (S)−tetrahydrodipicolinate (aminotransferase route): step 1/1
GMP biosynthesis
(R)−pantothenate biosynthesis
dUMP biosynthesis
L−arginine biosynthesis
pyruvate from D−glyceraldehyde 3−phosphate: step 4/5
L−arginine from L−ornithine and carbamoyl phosphate: step 2/3
lipid IV(A) biosynthesis
chorismate from D−erythrose 4−phosphate and phosphoenolpyruvate: step 7/7
5−phospho−alpha−D−ribose 1−diphosphate biosynthesis
isopentenyl diphosphate from 1−deoxy−D−xylulose 5−phosphate: step 1/6
spermidine biosynthesis
phosphatidylethanolamine biosynthesis
Pre
2 week
2 month
6 month
2
1.5
1
0.5
0