C1scr
C1shSdhB
Glycolysis
fructose-6-phosphate
glucose-6-phosphate
lactate
3-phosphoglycerate
D-glyceraldehdye-3-phosphate
dihydroxy-acetone-phosphate
fructose-1,6-bisphosphate
phosphoenolpyruvate
pyruvate
PPP
D-sedoheptulose-1-7-phosphate
6-phospho-D-gluconate
PRPP
ribose-phosphate
D-erythrose-4-phosphate
TCA cycle
succinate
aconitate
malate
fumarate
oxaloacetate
citrate
a-ketoglutarate
Amino acids
threonine
aspartate
alanine
serine
glycine
asparagine
proline
glutamate
lysine
phenylalanine
methionine
tryptophan
leucine-isoleucine
histidine
arginine
glutamine
tyrosine
cysteine
valine
1 carbon
S-adenosyl-L-methionine
S-adenosyl-L-homocysteine
5-methyl-THF
S-ribosyl-L-homocysteine
7,8-dihydrofolate
homocysteine
folate
Redox
glutathione
NAD+
NADP+
glutathione disulfide
NADH
Nucleotides
adenine
dTMP
guanine
UTP
CDP
deoxyuridine
AICAR
purine
UMP
dAMP
xanthine
dTTP
hypoxanthine
CTP
IDP
dTMP
UDP-D-glucuronate
N-carbamoyl-L-aspartate
uridine
adenosine
deoxyinosine
GTP
dCDP
UDP
ADP
dTDP
thymidine
dCTP
xanthosine-5-phosphate
uracil
GDP
dGDP
cytosine
dCMP
N-carbamoyl-L-aspartate
ADP-D-glucose
xanthosine
UDP-D-glucose
CMP
ATP
Carbamoyl phosphate
dihydroorotate
deoxyribose-phosphate
cyclic-AMP
orotate
deoxyadenosine
IMP
cytidine
dGTP
orotidine-5-phosphate
adenosine 5-phosphosulfate
dATP
GMP
guanosine
inosine
AMP
thymine
Other metabolites
D-glucarate
betaine aldehyde
Methionine sulfoxide
3-phospho-serine
DL-Pipecolic acid
glycolate
Guanidoacetic acid
Acetylcarnitine DL
FAD
N-acetyl-glutamate
2-Aminooctanoic acid
Hydroxy-methylbutanedioic acid
Cystine
Kynurenine
2-Isopropylmalic acid
trehalose-6-Phosphate
shikimate-3-phosphate
2-dehydro-D-gluconate
betaine
hydroxyproline
Ng,NG-dimethyl-L-arginine
ornithine
3-methylphenylacetic acid
2-hydroxygluterate
Uric acid
Maleic acid
glycerate
3-S-methylthiopropionate
S-methyl-5-thioadenosine
Cholic acid
Pyroglutamic acid
Kynurenic acid
Urea
acetoacetate
carnitine
Flavone
2-keto-isovalerate
acadesine
N6-Acetyl-L-lysine
Phenylpropiolic acid
sarcosine
allantoin
Pyrophosphate
taurine
Acetyllysine
nicotinate
creatine
methylnicotinamide
thiamine-phosphate
coenzyme A
biotin
cystathionine
Pyridoxamine
N-acetyl-glutamine
Indoleacrylic acid
Ascorbic acid
Xanthurenic acid
N-Acetyl-L-alanine
O-acetyl-L-serine
spermine
allantoate
Cellobiose
homoserine
Other metabolites
Methylmalonic acid
2-deoxyglucose-6-phosphate
4-aminobutyrate
myo-inositol
D-gluconate
glucosamine
2-oxo-4-methylthiobutanoate
succinyl-CoA
Atrolactic acid
cholesteryl sulfate
2-oxobutanoate
anthranilate
N-acetyl-glucosamine
pantothenate
Phenyllactic acid
2,3-dihydroxybenzoic acid
Aminoadipic acid
shikimate
Hydroxyphenylacetic acid
L-arginino-succinate
citrulline
Glycerophosphocholine
indole
4-Pyridoxic acid
UDP-N-acetyl-glucosamine
Phosphorylcholine
putrescine
7-methylguanosine
Citraconic acid
D-glucono-lactone-6-phosphate
2-ketohaxanoic acid
Taurodeoxycholic acid
Indole-3-carboxylic acid
nicotinamide
trans, trans-farnesyl diphosphate
trehalose-sucrose
glyoxylate
Creatinine
riboflavin
N-Acetylputrescine
Methylcysteine
p-hydroxybenzoate
N-acetyl-L-ornithine
choline
D-glucosamine-6-phosphate
Geranyl-PP
hydroxyphenylpyruvate
Hydroxyisocaproic acid
sn-glycerol-3-phosphate
pyridoxine
acetylphosphate
ethanolamine
dimethylglycine
spermidine
Nicotinamide ribotide
glucono-lactone
quinolinate
N-acetyl-glucosamine-1-phosphate
thiamine
Imidazoleacetic acid
p-aminobenzoate
phenylpyruvate
Fold change
≥2x
1.6x
1.3x
No change
0.8x
0.6x
≤0.5x