

BIOCHEMICAL	zscore
dimethyl sulfone	9.817992827
creatinine	3.469206113
salicylate	2.973672142
succinylcarnitine (C4-DC)	2.809797608
trimethylamine N-oxide	2.360833794
choline	2.354262432
2-methylbutyrylcarnitine (C5)	2.284481157
phosphate	2.170918944
3-methylglutarylcarnitine (2)	2.152266121
taurine	2.044631576
erythritol	1.971535951
3-carboxy-4-methyl-5-propyl-2-furanpropanoate (CMPF)	1.964516315
ergothioneine	1.952535949
fructose	1.783028224
erythronate*	1.728572921
pantothenate	1.623249277
methylsuccinoylcarnitine	1.600679981
urate	1.571054014
orotidine	1.551908988
methionine sulfone	1.533706077
3-methylxanthine	1.531531967
ribitol	1.525791105
N1-Methyl-2-pyridone-5-carboxamide	1.521514738
arabitol/xylitol	1.502506306
1-(1-enyl-stearoyl)-2-docosahexaenoyl-GPE (P-18:0/22:6)*	1.46478281
carboxyethyl-GABA	1.458147739
glutaryl carnitine (C5-DC)	1.444326851
aspartate	1.437041706
trigonelline (N'-methylnicotinate)	1.426433257
lysine	1.417156538
1-oleoyl-GPC (18:1)	1.416180234
N6-carbamoylthreonyl adenosine	1.392755348
inosine	1.38990455
lactate	1.364467895
theophylline	1.34307577
dopamine 3-O-sulfate	1.332046173
mannitol/sorbitol	1.2976897
tartarate	1.297501831
1-stearoyl-2-docosahexaenoyl-GPE (18:0/22:6)*	1.265907391
stearoyl sphingomyelin (d18:1/18:0)	1.263242952
7-alpha-hydroxy-3-oxo-4-cholestenoate (7-Hoca)	1.262809144
bilirubin (Z,Z)	1.24904778
1-palmitoyl-2-docosahexaenoyl-GPC (16:0/22:6)	1.221873204
1-stearoyl-2-docosahexaenoyl-GPC (18:0/22:6)	1.21610908
N-acetylgarginine	1.20265243
bilirubin (E,E)*	1.167972724
N-acetylglycine	1.128605381
imidazole lactate	1.10634335
4-imidazoleacetate	1.104505518

carnitine	1.092217475
cholesterol	1.087198261
tryptophan betaine	1.080896524
tiglylcarnitine (C5:1-DC)	1.055392946
gluconate	1.046284282
citramalate	1.037631217
5-hydroxyhexanoate	1.035905356
androstenediol (3beta,17beta) disulfate (1)	1.033914469
3-methylglutaconate	1.02608518
galactitol (dulcitol)	1.007864602
1-palmitoyl-2-oleoyl-GPC (16:0/18:1)	0.996130273
betaine	0.994734813
catechol sulfate	0.986052971
1-(1-enyl-palmitoyl)-2-oleoyl-GPC (P-16:0/18:1)*	0.979909305
beta-hydroxyisovaleroylcarnitine	0.969894464
dehydroepiandrosterone sulfate (DHEA-S)	0.968906674
allantoin	0.966602654
arginine	0.958932043
1-methylnicotinamide	0.9587374
1-stearoyl-2-oleoyl-GPC (18:0/18:1)	0.952080297
pyruvate	0.95036262
1-palmitoyl-GPC (16:0)	0.947847731
threonate	0.936167491
sphingomyelin (d18:1/18:1, d18:2/18:0)	0.935451229
sulfate*	0.935085881
spermidine	0.926352088
nicotinamide riboside	0.908229253
sphingomyelin (d18:1/20:0, d16:1/22:0)*	0.907203656
glucuronate	0.902531393
urea	0.898841286
palmitoyl sphingomyelin (d18:1/16:0)	0.879736606
N-acetylasparagine	0.874128025
3-hydroxy-2-ethylpropionate	0.869667982
glucose	0.860002083
sphingomyelin (d18:1/24:1, d18:2/24:0)*	0.837148076
homoarginine	0.830781496
2,3-dihydroxyisovalerate	0.823556935
ribonate	0.821278645
N-acetylthreonine	0.818874236
citrate	0.812629222
sucrose	0.80774982
pyridoxate	0.806794191
1-stearoyl-2-linoleoyl-GPC (18:0/18:2)*	0.802276743
N-acetyl-aspartyl-glutamate (NAAG)	0.799587345
nicotinamide	0.793985848
C-glycosyltryptophan	0.792686115
1-(1-enyl-palmitoyl)-2-docosahexaenoyl-GPE (P-16:0/22:6)*	0.78994393
1-palmitoleoyl-GPC (16:1)*	0.780510627
1-stearoyl-GPC (18:0)	0.779903624
1-palmitoyl-GPA (16:0)	0.778051543

creatine	0.766484741
galactonate	0.757945281
7-methylxanthine	0.755886626
O-sulfo-L-tyrosine	0.753659984
glycine	0.749409564
glycerophosphoinositol*	0.7480728
xanthosine	0.715329718
sphingomyelin (d18:2/16:0, d18:1/16:1)*	0.712208214
1,2-dipalmitoyl-GPC (16:0/16:0)	0.707556371
oxalate (ethanedioate)	0.702141467
gulonate*	0.6964507
alanine	0.685900446
beta-hydroxyisovalerate	0.685141811
N-acetylneuraminic acid	0.664869758
glycerol 3-phosphate	0.660610039
caffeine	0.637405277
1-palmitoyl-2-oleoyl-GPC (O-16:0/18:1)*	0.631961806
ribose	0.617024328
theobromine	0.583144881
orotate	0.582955379
malonate	0.567712599
sphingomyelin (d18:1/14:0, d16:1/16:0)*	0.563060324
4-acetamidobutanoate	0.556166353
1-palmitoyl-2-dihomo-linolenoyl-GPC (16:0/20:3n3 or 6)*	0.53502905
isobutyrylcarnitine (C4)	0.535018098
1-linoleoyl-GPC (18:2)	0.506945601
trans-4-hydroxyproline	0.49029252
propionylcarnitine (C3)	0.487397085
1-stearoyl-2-dihomo-linolenoyl-GPC (18:0/20:3n3 or 6)*	0.486647759
1-arachidonoyl-GPC (20:4n6)*	0.475249227
deoxycarnitine	0.466056099
homocitrulline	0.463561304
methionine	0.463345933
2-methylcitrate	0.45290932
2-aminooctanoate	0.451376192
phenyllactate (PLA)	0.446570131
3-indoxyl sulfate	0.426353009
stachydrine	0.420560063
p-cresol sulfate	0.416214824
3-methylhistidine	0.415683889
1-oleoylglycerol (18:1)	0.407544867
1-(1-enyl-stearoyl)-2-arachidonoyl-GPE (P-18:0/20:4)*	0.387980987
3-methyl-2-oxobutyrate	0.382317679
N-methylproline	0.374001125
citrulline	0.373411737
phosphoethanolamine	0.363671407
choline phosphate	0.357085227
5-methyluridine (ribothymidine)	0.337216337
3-methyl-2-oxovalerate	0.336898026
pseudouridine	0.330701139

aconitate [cis or trans]	0.33057808
1-palmitoyl-2-arachidonoyl-GPC (O-16:0/20:4)*	0.320980336
acetylcarnitine (C2)	0.31036991
valine	0.302241805
isoleucine	0.287016972
1-palmitoyl-2-adrenoyl-GPC (16:0/22:4)*	0.283495137
N-acetylglutamine	0.2775685
1-(1-enyl-palmitoyl)-2-arachidonoyl-GPC (P-16:0/20:4)*	0.271573214
N-acetylvaline	0.220990006
N2-methylguanosine	0.195639527
1-palmitoyl-2-linoleoyl-GPC (16:0/18:2)	0.162540731
1-oleoyl-2-linoleoyl-GPC (18:1/18:2)*	0.161994835
1-palmitoyl-2-palmitoleoyl-GPC (16:0/16:1)*	0.159934663
N6,N6,N6-trimethyllysine	0.158539835
N-acetylleucine	0.154913033
isovalerylcarnitine (C5)	0.136413442
N-acetyls erine	0.136277673
N-acetyl-3-methylhistidine*	0.134489576
N1-methyladenosine	0.11777603
arabonate/xylonate	0.117723418
1-palmitoyl-2-arachidonoyl-GPC (16:0/20:4n6)	0.115541775
guanosine	0.107727908
2'-deoxyuridine	0.101888325
1-oleoyl-GPA (18:1)	0.1
1-(1-enyl-stearoyl)-GPE (P-18:0)*	0.1
1-stearoyl-2-meadoyl-GPC (18:0/20:3n9)*	0.1
quinat e	0.1
S-allylcysteine	0.1
1-palmitoyl-2-stearoyl-GPC (16:0/18:0)	0.1
alpha-hydroxyisovalerate	0.093923059
1-stearoyl-2-arachidonoyl-GPC (18:0/20:4)	0.0516968
glutamine	0.043692642
acisoga	0.035780893
glycerol	0.008999927
4-methyl-2-oxopentanoate	0.006744567
6-oxopiperidine-2-carboxylate	0.002960097
glutamate	-0.007053492
dimethylglycine	-0.012494256
myo-inositol	-0.028920237
N-delta-acetylornithine	-0.031582875
3-hydroxyisobutyrate	-0.047543771
1-myristoyl-2-palmitoyl-GPC (14:0/16:0)	-0.049279625
acetoacetate	-0.060565988
1-(1-enyl-palmitoyl)-2-arachidonoyl-GPE (P-16:0/20:4)*	-0.06978147
hypoxanthine	-0.081179275
tartronate (hydroxymalonate)	-0.082955592
N-acetylputrescine	-0.103175337
phenylacetylglutamine	-0.103337458
pyroglutamine*	-0.103403308
N-acetylalanine	-0.10612567

5-methylthioadenosine (MTA)	-0.111678511
isocitrate	-0.113925511
1-methylhistidine	-0.127647703
picolinate	-0.130808739
N6-methyladenosine	-0.133866811
3-methoxytyramine sulfate	-0.134011598
alpha-hydroxyisocaproate	-0.139675581
phenol sulfate	-0.166550559
leucine	-0.169902199
N2,N2-dimethylguanosine	-0.182918204
2'-deoxycytidine	-0.20161681
methionine sulfoxide	-0.202704836
mannose	-0.21603747
N-formylmethionine	-0.230827321
phenylalanine	-0.238397816
2-hydroxy-3-methylvalerate	-0.263548111
dimethylarginine (SDMA + ADMA)	-0.277819266
succinamic acid	-0.281158395
cysteine	-0.281248881
7-methylguanine	-0.312250768
xanthine	-0.322717745
N-acetylhistidine	-0.32278721
argininosuccinate	-0.324098222
methylmalonate (MMA)	-0.32454581
5-oxoproline	-0.335479087
3-hydroxyoctanoate	-0.3451624
pipecolate	-0.353128763
dimethylmalonic acid	-0.354475452
2-aminobutyrate	-0.365671666
3-(4-hydroxyphenyl)lactate	-0.39330629
glutamate, gamma-methyl ester	-0.394709385
N-acetylmethionine	-0.395380124
ethylmalonate	-0.395690343
glycerate	-0.399790854
threonine	-0.409680772
2-piperidinone	-0.445401408
ornithine	-0.484202059
2-hydroxybutyrate/2-hydroxyisobutyrate	-0.49456858
3-hydroxybutyrate (BHBA)	-0.498704665
1-methyl-4-imidazoleacetate	-0.500939541
adenine	-0.513522095
tyrosine	-0.520668416
histidine	-0.530671308
N-acetyltaurine	-0.533006558
cytidine	-0.547556002
3-hydroxy-3-methylglutarate	-0.556657466
glycerophosphoethanolamine	-0.630220125
asparagine	-0.63062155
alpha-ketoglutarate	-0.643673862
homovanillate (HVA)	-0.676023139

tryptophan	-0.681787944
1,5-anhydroglucitol (1,5-AG)	-0.682093512
5,6-dihydrothymine	-0.710804633
proline	-0.724468156
maleate	-0.750871424
octanoylcarnitine (C8)	-0.764002499
3-ureidopropionate	-0.789623453
3-methoxytyrosine	-0.796664033
N-acetylglucosaminylasparagine	-0.833141893
N-acetyl-beta-alanine	-0.845588072
kynurenine	-0.886919171
anthranilate	-0.949079824
malate	-1.105124837
N-acetylaspartate (NAA)	-1.237255637
uridine	-1.366690743
serine	-1.379709496
N-acetylglutamate	-1.674602521
2-hydroxyadipate	-1.695267981
2-aminoheptanoate	-1.75371351
succinate	-1.95248945
1-palmitoylglycerol (16:0)	-2.16162092
homocarnosine	-3.749327292

SUPER_PATHWAY	SUB_PATHWAY	HMDB_ID
Xenobiotics	Chemical	HMDB04983
Amino Acid	Creatine Metabolism	HMDB00562
Xenobiotics	Drug	HMDB01895
Energy	TCA Cycle	HMDB61717
Lipid	Phospholipid Metabolism	HMDB00925
Lipid	Phospholipid Metabolism	HMDB00097
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00378
Energy	Oxidative Phosphorylation	HMDB01429
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00552
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	HMDB00251
Xenobiotics	Food Component/Plant	HMDB02994
Lipid	Fatty Acid, Dicarboxylate	HMDB61112
Xenobiotics	Food Component/Plant	HMDB03045
Carbohydrate	Fructose, Mannose and Galactose Metabolism	HMDB00660
Carbohydrate	Aminosugar Metabolism	HMDB00613
Cofactors and Vitamins	Pantothenate and CoA Metabolism	HMDB00210
Amino Acid	Leucine, Isoleucine and Valine Metabolism	NA
Nucleotide	Purine Metabolism, (Hypo)Xanthine/Inosine containing	HMDB00289
Nucleotide	Pyrimidine Metabolism, Orotate containing	HMDB00788
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	NA
Xenobiotics	Xanthine Metabolism	HMDB01886
Carbohydrate	Pentose Metabolism	HMDB00508
Cofactors and Vitamins	Nicotinate and Nicotinamide Metabolism	HMDB04193
Carbohydrate	Pentose Metabolism	NA
Lipid	Plasmalogen	HMDB11394
Amino Acid	Glutamate Metabolism	HMDB02201
Amino Acid	Lysine Metabolism	HMDB13130
Amino Acid	Alanine and Aspartate Metabolism	HMDB00191
Cofactors and Vitamins	Nicotinate and Nicotinamide Metabolism	HMDB00875
Amino Acid	Lysine Metabolism	HMDB00182
Lipid	Lysolipid	HMDB02815
Nucleotide	Purine Metabolism, Adenine containing	HMDB41623
Nucleotide	Purine Metabolism, (Hypo)Xanthine/Inosine containing	HMDB00195
Carbohydrate	Glycolysis, Gluconeogenesis, and Pyruvate Metabolism	HMDB00190
Xenobiotics	Xanthine Metabolism	HMDB01889
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB06275
Carbohydrate	Fructose, Mannose and Galactose Metabolism	HMDB00247
Xenobiotics	Food Component/Plant	HMDB00956
Lipid	Phospholipid Metabolism	HMDB05334
Lipid	Sphingolipid Metabolism	HMDB01348
Lipid	Sterol	HMDB12458
Cofactors and Vitamins	Hemoglobin and Porphyrin Metabolism	HMDB00054
Lipid	Phospholipid Metabolism	HMDB07991
Lipid	Phospholipid Metabolism	NA
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB04620
Cofactors and Vitamins	Hemoglobin and Porphyrin Metabolism	NA
Amino Acid	Glycine, Serine and Threonine Metabolism	HMDB00532
Amino Acid	Histidine Metabolism	HMDB02320
Amino Acid	Histidine Metabolism	HMDB02024

Lipid	Carnitine Metabolism	HMDB00062
Lipid	Sterol	HMDB00067
Amino Acid	Tryptophan Metabolism	HMDB61115
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB02366
Xenobiotics	Food Component/Plant	HMDB00625
Amino Acid	Glutamate Metabolism	HMDB00426
Lipid	Fatty Acid, Monohydroxy	HMDB00525
Lipid	Steroid	HMDB03818
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00522
Carbohydrate	Fructose, Mannose and Galactose Metabolism	HMDB00107
Lipid	Phospholipid Metabolism	HMDB07972
Amino Acid	Glycine, Serine and Threonine Metabolism	HMDB00043
Xenobiotics	Benzoate Metabolism	HMDB59724
Lipid	Plasmalogen	NA
Amino Acid	Leucine, Isoleucine and Valine Metabolism	NA
Lipid	Steroid	HMDB01032
Nucleotide	Purine Metabolism, (Hypo)Xanthine/Inosine containing	HMDB00462
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB00517
Cofactors and Vitamins	Nicotinate and Nicotinamide Metabolism	HMDB00699
Lipid	Phospholipid Metabolism	HMDB08038
Carbohydrate	Glycolysis, Gluconeogenesis, and Pyruvate Metabolism	HMDB00243
Lipid	Lysolipid	HMDB10382
Cofactors and Vitamins	Ascorbate and Aldarate Metabolism	HMDB00943
Lipid	Sphingolipid Metabolism	HMDB12101
Xenobiotics	Chemical	HMDB01448
Amino Acid	Polyamine Metabolism	HMDB01257
Cofactors and Vitamins	Nicotinate and Nicotinamide Metabolism	HMDB00855
Lipid	Sphingolipid Metabolism	HMDB12102
Carbohydrate	Aminosugar Metabolism	HMDB00127
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB00294
Lipid	Sphingolipid Metabolism	NA
Amino Acid	Alanine and Aspartate Metabolism	HMDB06028
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00396
Carbohydrate	Glycolysis, Gluconeogenesis, and Pyruvate Metabolism	HMDB00122
Lipid	Sphingolipid Metabolism	HMDB12107
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB00670
Xenobiotics	Food Component/Plant	HMDB12141
Carbohydrate	Pentose Metabolism	HMDB00867
Amino Acid	Glycine, Serine and Threonine Metabolism	HMDB62557
Energy	TCA Cycle	HMDB00094
Carbohydrate	Disaccharides and Oligosaccharides	HMDB00258
Cofactors and Vitamins	Vitamin B6 Metabolism	HMDB00017
Lipid	Phospholipid Metabolism	NA
Amino Acid	Glutamate Metabolism	HMDB01067
Cofactors and Vitamins	Nicotinate and Nicotinamide Metabolism	HMDB01406
Amino Acid	Tryptophan Metabolism	NA
Lipid	Plasmalogen	HMDB05780
Lipid	Lysolipid	HMDB10383
Lipid	Lysolipid	HMDB10384
Lipid	Lysolipid	HMDB00327



Amino Acid	Creatine Metabolism	HMDB00064
Carbohydrate	Fructose, Mannose and Galactose Metabolism	HMDB00565
Xenobiotics	Xanthine Metabolism	HMDB01991
Xenobiotics	Chemical	NA
Amino Acid	Glycine, Serine and Threonine Metabolism	HMDB00123
Lipid	Phospholipid Metabolism	NA
Nucleotide	Purine Metabolism, (Hypo)Xanthine/Inosine containing	HMDB00299
Lipid	Sphingolipid Metabolism	NA
Lipid	Phospholipid Metabolism	HMDB00564
Cofactors and Vitamins	Ascorbate and Aldarate Metabolism	HMDB02329
Cofactors and Vitamins	Ascorbate and Aldarate Metabolism	HMDB03290
Amino Acid	Alanine and Aspartate Metabolism	HMDB00161
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00754
Carbohydrate	Aminosugar Metabolism	HMDB00230
Lipid	Glycerolipid Metabolism	HMDB00126
Xenobiotics	Xanthine Metabolism	HMDB01847
Lipid	Phospholipid Metabolism	NA
Carbohydrate	Pentose Metabolism	HMDB00283
Xenobiotics	Xanthine Metabolism	HMDB02825
Nucleotide	Pyrimidine Metabolism, Orotate containing	HMDB00226
Lipid	Fatty Acid Synthesis	HMDB00691
Lipid	Sphingolipid Metabolism	HMDB12097
Amino Acid	Polyamine Metabolism	HMDB03681
Lipid	Phospholipid Metabolism	NA
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00736
Lipid	Lysolipid	HMDB10386
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB00725
Lipid	Fatty Acid Metabolism (also BCAA Metabolism)	HMDB00824
Lipid	Phospholipid Metabolism	HMDB08047
Lipid	Lysolipid	HMDB10395
Lipid	Carnitine Metabolism	HMDB01161
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB00679
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	HMDB00696
Energy	TCA Cycle	HMDB00379
Lipid	Fatty Acid, Amino	HMDB00991
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB00779
Amino Acid	Tryptophan Metabolism	HMDB00682
Xenobiotics	Food Component/Plant	HMDB04827
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB11635
Amino Acid	Histidine Metabolism	HMDB00479
Lipid	Monoacylglycerol	HMDB11567
Lipid	Plasmalogen	HMDB05779
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00019
Amino Acid	Urea cycle; Arginine and Proline Metabolism	NA
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB00904
Lipid	Phospholipid Metabolism	HMDB00224
Lipid	Phospholipid Metabolism	HMDB01565
Nucleotide	Pyrimidine Metabolism, Uracil containing	HMDB00884
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB03736
Nucleotide	Pyrimidine Metabolism, Uracil containing	HMDB00767

Energy	TCA Cycle	NA
Lipid	Phospholipid Metabolism	NA
Lipid	Fatty Acid Metabolism(Acyl Carnitine)	HMDB00201
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00883
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00172
Lipid	Phospholipid Metabolism	HMDB07988
Amino Acid	Glutamate Metabolism	HMDB06029
Lipid	Plasmalogen	HMDB11220
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB11757
Nucleotide	Purine Metabolism, Guanine containing	HMDB05862
Lipid	Phospholipid Metabolism	HMDB07973
Lipid	Phospholipid Metabolism	NA
Lipid	Phospholipid Metabolism	NA
Amino Acid	Lysine Metabolism	HMDB01325
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB11756
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00688
Amino Acid	Glycine, Serine and Threonine Metabolism	HMDB02931
Amino Acid	Histidine Metabolism	NA
Nucleotide	Purine Metabolism, Adenine containing	HMDB03331
Carbohydrate	Pentose Metabolism	NA
Lipid	Phospholipid Metabolism	HMDB07982
Nucleotide	Purine Metabolism, Guanine containing	HMDB00133
Nucleotide	Pyrimidine Metabolism, Uracil containing	HMDB00012
Lipid	Lysolipid	NA
Lipid	Lysoplasmalogen	NA
Lipid	Phospholipid Metabolism	HMDB08046
Xenobiotics	Food Component/Plant	HMDB03072
Xenobiotics	Food Component/Plant	HMDB34323
Lipid	Phospholipid Metabolism	HMDB07970
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00407
Lipid	Phospholipid Metabolism	HMDB08048
Amino Acid	Glutamate Metabolism	HMDB00641
Amino Acid	Polyamine Metabolism	NA
Lipid	Glycerolipid Metabolism	HMDB00131
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00695
Amino Acid	Lysine Metabolism	HMDB61705
Amino Acid	Glutamate Metabolism	HMDB00148
Amino Acid	Glycine, Serine and Threonine Metabolism	HMDB00092
Lipid	Inositol Metabolism	HMDB00211
Amino Acid	Urea cycle; Arginine and Proline Metabolism	NA
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00336
Lipid	Phospholipid Metabolism	HMDB07869
Lipid	Ketone Bodies	HMDB00060
Lipid	Plasmalogen	HMDB11352
Nucleotide	Purine Metabolism, (Hypo)Xanthine/Inosine containing	HMDB00157
Xenobiotics	Bacterial/Fungal	HMDB35227
Amino Acid	Polyamine Metabolism	HMDB02064
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB06344
Amino Acid	Glutamate Metabolism	NA
Amino Acid	Alanine and Aspartate Metabolism	HMDB00766

Amino Acid	Polyamine Metabolism	HMDB01173
Energy	TCA Cycle	HMDB00193
Amino Acid	Histidine Metabolism	HMDB00001
Amino Acid	Tryptophan Metabolism	HMDB02243
Nucleotide	Purine Metabolism, Adenine containing	HMDB04044
Amino Acid	Phenylalanine and Tyrosine Metabolism	NA
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00746
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB60015
Amino Acid	Leucine, Isoleucine and Valine Metabolism	NA
Nucleotide	Purine Metabolism, Guanine containing	HMDB04824
Nucleotide	Pyrimidine Metabolism, Cytidine containing	HMDB00014
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	HMDB02005
Carbohydrate	Fructose, Mannose and Galactose Metabolism	HMDB00169
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	HMDB01015
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB00159
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00317
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB01539
Xenobiotics	Chemical	NA
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	HMDB00574
Nucleotide	Purine Metabolism, Guanine containing	HMDB00897
Nucleotide	Purine Metabolism, (Hypo)Xanthine/Inosine containing	HMDB00292
Amino Acid	Histidine Metabolism	HMDB32055
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB00052
Lipid	Fatty Acid Metabolism (also BCAA Metabolism)	HMDB00202
Amino Acid	Glutathione Metabolism	HMDB00267
Lipid	Fatty Acid, Monohydroxy	HMDB01954
Amino Acid	Lysine Metabolism	HMDB00070
Lipid	Fatty Acid, Dicarboxylate	HMDB02001
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	HMDB00650
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB00755
Amino Acid	Glutamate Metabolism	HMDB61715
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	HMDB11745
Amino Acid	Leucine, Isoleucine and Valine Metabolism	HMDB00622
Carbohydrate	Glycolysis, Gluconeogenesis, and Pyruvate Metabolism	HMDB00139
Amino Acid	Glycine, Serine and Threonine Metabolism	HMDB00167
Xenobiotics	Food Component/Plant	HMDB11749
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB03374
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	NA
Lipid	Ketone Bodies	HMDB00357
Amino Acid	Histidine Metabolism	HMDB02820
Nucleotide	Purine Metabolism, Adenine containing	HMDB00034
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB00158
Amino Acid	Histidine Metabolism	HMDB00177
Amino Acid	Methionine, Cysteine, SAM and Taurine Metabolism	NA
Nucleotide	Pyrimidine Metabolism, Cytidine containing	HMDB00089
Lipid	Mevalonate Metabolism	HMDB00355
Lipid	Phospholipid Metabolism	HMDB00114
Amino Acid	Alanine and Aspartate Metabolism	HMDB00168
Energy	TCA Cycle	HMDB00208
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB00118

Amino Acid	Tryptophan Metabolism	HMDB00929
Carbohydrate	Glycolysis, Gluconeogenesis, and Pyruvate Metabolism	HMDB02712
Nucleotide	Pyrimidine Metabolism, Thymine containing	HMDB00079
Amino Acid	Urea cycle; Arginine and Proline Metabolism	HMDB00162
Lipid	Fatty Acid, Dicarboxylate	HMDB00176
Lipid	Fatty Acid Metabolism(Acyl Carnitine)	HMDB00791
Nucleotide	Pyrimidine Metabolism, Uracil containing	HMDB00026
Amino Acid	Phenylalanine and Tyrosine Metabolism	HMDB01434
Carbohydrate	Aminosugar Metabolism	HMDB00489
Nucleotide	Pyrimidine Metabolism, Uracil containing	NA
Amino Acid	Tryptophan Metabolism	HMDB00684
Amino Acid	Tryptophan Metabolism	HMDB01123
Energy	TCA Cycle	HMDB00156
Amino Acid	Alanine and Aspartate Metabolism	HMDB00812
Nucleotide	Pyrimidine Metabolism, Uracil containing	HMDB00296
Amino Acid	Glycine, Serine and Threonine Metabolism	HMDB00187
Amino Acid	Glutamate Metabolism	HMDB01138
Lipid	Fatty Acid, Dicarboxylate	HMDB00321
Lipid	Fatty Acid, Amino	NA
Energy	TCA Cycle	HMDB00254
Lipid	Monoacylglycerol	HMDB31074
Peptide	Dipeptide Derivative	HMDB00745