Abbreviation Metabolite

13GLUCAN 1,3-beta-D-Glucan

13PDG 3-Phospho-D-glyceroyl phosphate 23DAACP 2,3-Dehydroacyl-[acyl-carrier-protein] 23PDG 2,3-Bisphospho-D-glycerate

2HDACP Hexadecenoyl-[acp]

2MANPD ("alpha"-D-mannosyl)(,2)-"beta"-D-mannosyl-diacetylchitobiosyldiphosphod olichol

2N6H 2-Nonaprenyl-6-hydroxyphenol 3-Demethylubiquinone-9 2NMHMB 2NMHMBm 3-Demethylubiquinone-9M

2NPMBm 2-Nonaprenyl-6-methoxy-1,4-benzoquinoneM

2NPMMBm 2-Nonaprenyl-3-methyl-6-methoxy-1,4-benzoquinoneM

2NPMP 2-Nonaprenyl-6-methoxyphenol 2NPMPm 2-Nonaprenyl-6-methoxyphenolM 2NPPP 2-Nonaprenylphenol 2PG

2-Phospho-D-glycerate

3DDAH7P 2-Dehydro-3-deoxy-D-arabino-heptonate 7-phosphate (3R)-3-Hydroxypalmitoyl-[acyl-carrier protein] 3HPACP

3PG 3-Phospho-D-glycerate

3PSER 3-Phosphoserine

3PSME 5-O-(1-Carboxyvinyl)-3-phosphoshikimate

4HBZ 4-Hydroxybenzoate 4HLT 4-Hydroxy-L-threonine 4HPP 3-(4-Hydroxyphenyl)pyruvate

4PPNCYS (R)-4'-Phosphopantothenoyl-L-cysteine

4PPNTE Pantetheine 4'-phosphate 4PPNTEm Pantetheine 4'-phosphateM 4PPNTO D-4'-Phosphopantothenate 5MTA 5'-Methylthioadenosine 6DGLC D-Gal alpha 1->6D-Glucose

A6RP 5-Amino-6-ribitylamino-2,4 (1H, 3H)-pyrimidinedione

A6RP5P 5-Amino-6-(5'-phosphoribosylamino)uracil A6RP5P2 5-Amino-6-(5'-phosphoribitylamino)uracil

AACCOA Acetoacetyl-CoA

AACP Acyl-[acyl-carrier-protein]

AATRE6P alpha,alpha'-Trehalose 6-phosphate ABUTm 2-Aceto-2-hydroxy butyrateM

Acetate AC

**ACACP** Acyl-[acyl-carrier protein] ACACPm Acyl-[acyl-carrier protein]M

Acetaldehyde **ACAL** ACALm AcetaldehydeM **ACAR** O-Acetylcarnitine **ACARm** O-AcetylcarnitineM ACCOA Acetyl-CoA **ACCOAm** Acetyl-CoAM ACLAC 2-Acetolactate ACLACm 2-AcetolactateM ACm AcetateM

ACNL 3-Indoleacetonitrile

ACOA Acyl-CoA

ACP Acyl-carrier protein ACPm Acyl-carrier proteinM ACTAC Acetoacetate **ACTACm** AcetoacetateM

**ACYBUT** gamma-Amino-gamma-cyanobutanoate

ΑD Adenine

**ADCHOR** 4-amino-4-deoxychorismate

ADm AdenineM ADN Adenosine **ADNm** AdenonsineM ADP ADP ADPm ADPM **ADPRIB ADPribose ADPRIBm ADPriboseM** 

AGL3P Acyl-sn-glycerol 3-phosphate

AHHMD 2-Amino-7,8-dihydro-4-hydroxy-6-(diphosphooxymethyl)pteridine

**AHHMP** 2-Amino-4-hydroxy-6-hydroxymethyl-7,8-dihydropteridine

AHM 4-Amino-5-hydroxymethyl-2-methylpyrimidine **AHMP** 4-Amino-2-methyl-5-phosphomethylpyrimidine

**AHMPP** 2-Methyl-4-amino-5-hydroxymethylpyrimidine diphosphate

AHTD 2-Amino-4-hydroxy-6-(erythro-1,2,3-trihydroxypropyl)-dihydropteridine triphosphate

**AICAR** 1-(5'-Phosphoribosyl)-5-amino-4-imidazolecarboxamide

AIR Aminoimidazole ribotide AKA 2-Oxoadipate
AKAm 2-OxoadipateM
AKG 2-Oxoglutarate
AKGm 2-OxoglutarateM
AKP 2-Dehydropantoate
AKPm 2-DehydropantoateM

ALA L-Alanine
ALAGLY R-S-Alanylglycine
ALAm L-AlanineM
ALAV 5-Aminolevulinate
ALAVm 5-AminolevulinateM
ALTRNA L-Arginyl-tRNA(Arg)

AM6SA 2-Aminomuconate 6-semialdehyde

AMA L-2-Aminoadipate

AMASA L-2-Aminoadipate 6-semialdehyde

AMG Methyl-D-glucoside

AMP AMP AMPM

AMUCO 2-Aminomuconate AN Anthranilate

AONA 8-Amino-7-oxononanoate
APEP Nalpha-Acetylpeptide
APROA 3-Aminopropanal
APROP alpha-Aminopropiononitrile
APRUT N-Acetylputrescine
APS Adenylylsulfate

ARAB D-Arabinose
ARABLAC D-Arabinono-1,4-lactone

ARG L-Arginine
ARGSUCC N-(L-Arginino)succinate
ASER O-Acetyl-L-serine
ASN L-Asparagine

ASP L-Aspartate
ASPERMD N1-Acetylspermidine

ASPM L-AspartateM
ASPRM N1-Acetylspermine
ASPSA L-Aspartate 4-semialdehyde
ASPTRNA L-Asparaginyl-tRNA(Asn)

ASPTRNA L-Asparaginyl-tRNA(Asn)
ASPTRNAm L-Asparaginyl-tRNA(Asn)M
ASUC N6-(1,2-Dicarboxyethyl)-AMP
AT3P2 Acyldihydroxyacetone phosphate

 ATN
 Allantoin

 ATP
 ATP

 ATPm
 ATPM

 ATRNA
 tRNA(Arg)

ATRP P1,P4-Bis(5'-adenosyl) tetraphosphate

ATT Allantoate bALA beta-Alanine

BASP 4-Phospho-L-aspartate bDG6P beta-D-Glucose 6-phosphate

bDGLC beta-D-Glucose
BIO Biotin
BT Biotin

C100ACP Decanoyl-[acp]

C120ACP Dodecanoyl-[acyl-carrier protein]
C120ACPm Dodecanoyl-[acyl-carrier protein]M

C140 Myristic acid

C140ACP Myristoyl-[acyl-carrier protein]
C140ACPm Myristoyl-[acyl-carrier protein]M
C141ACP Tetradecenoyl-[acyl-carrier protein]
C141ACPm Tetradecenoyl-[acyl-carrier protein]M

C160 Palmitate

C160ACP Hexadecanoyl-[acp] Hexadecanoyl-[acp]M

C161 1-Hexadecene

C161ACP Palmitoyl-[acyl-carrier protein]
C161ACPm Palmitoyl-[acyl-carrier protein]M

C16A C16\_aldehydes C180 Stearate

C180ACP Stearoyl-[acyl-carrier protein]
C180ACPm Stearoyl-[acyl-carrier protein]M
C181 1-Octadecene

C181 1-Octadecene C181ACP Oleoyl-[acyl-ca

C181ACP Oleoyl-[acyl-carrier protein]
C181ACPm Oleoyl-[acyl-carrier protein]M

C182ACP Linolenoyl-[acyl-carrier protein] C182ACPm Linolenoyl-[acyl-carrier protein]M CAASP

N-Carbamoyl-L-aspartate

CAIR 1-(5-Phospho-D-ribosyl)-5-amino-4-imidazolecarboxylate

CALH 2-(3-Carboxy-3-aminopropyl)-L-histidine

cAMP 3',5'-Cyclic AMP CAP Carbamoyl phosphate

CAR Carnitine CARm CarnitineM

**CBHCAP** 3-Isopropylmalate CBHCAPm 3-IsopropylmalateM cCMP 3',5'-Cyclic CMP cdAMP 3',5'-Cyclic dAMP CDP CDP **CDPCHO** CDPcholine CDPdiacylglycerol CDPDG CDPDGm CDPdiacylglycerolM

**CDPETN** CDPethanolamine CER2 Ceramide-2 CER3 Ceramide-3 **CGLY** Cys-Gly cGMP 3',5'-Cyclic GMP CHCOA 6-Carboxyhexanoyl-CoA

CHIT Chitin CHITO Chitosan CHO Choline CHOR Chorismate 3',5'-Cyclic IMP cIMP CIT Citrate CITm CitrateM CITR L-Citrulline CardiolipinM CLm CMP CMP CMPm СМРМ

CMUSA 2-Amino-3-carboxymuconate semialdehyde

CO<sub>2</sub> CO2 CO2m CO2M COA CoA COAm CoAM

CPAD5P 1-(2-Carboxyphenylamino)-1-deoxy-D-ribulose 5-phosphate

CPP Coproporphyrinogen

CTP CTP CTPm CTPM CYS L-Cysteine CYTD Cytidine **CYTS** Cytosine

D45PI 1-Phosphatidyl-D-myo-inositol 4,5-bisphosphate

D6PGC 6-Phospho-D-gluconate

D6PGL D-Glucono-1,5-lactone 6-phosphate

2,5-Diamino-6-hydroxy-4-(5'-phosphoribosylamino)-pyrimidine D6RP5P

D8RL 6,7-Dimethyl-8-(1-D-ribityl)lumazine

DA Deoxyadenosine

DADP dADP DAGLY Diacylglycerol DAMP dAMP dAMP dAMP

DANNA 7,8-Diaminononanoate DAPRP 1,3-Diaminopropane

DATP dATP

DB4P

L-3,4-Dihydroxy-2-butanone 4-phosphate

DC Deoxycytidine DCDP dCDP DCMP dCMP DCTP dCTP

**DFUC** alpha-D-Fucoside DG Deoxyguanosine

DGDP dGDP **DGMP** dGMP

DGPP Diacylglycerol pyrophosphate

DGTP dGTP DHF Dihydrofolate DHFm DihydrofolateM

DHMVAm (R)-2,3-dihydroxy-3-methylbutanoateM

DHP 2-Amino-4-hydroxy-6-(D-erythro-1,2,3-trihydroxypropyl)-7,8-dihydropteridine DHPP Dihydroneopterin phosphate
DHPT Dihydropteroate
DHSK 3-Dehydroshikimate
DHSP Sphinganine 1-phosphate
DHSPH 3-Dehydrosphinganine

DHVALm (R)-3-Hydroxy-3-methyl-2-oxobutanoateM DIMGP D-erythro-1-(Imidazol-4-yl)glycerol 3-phosphate

DIN Deoxyinosin
DIPEP Dipeptide

DISAC1P 2,3-bis(3-hydroxytetradecanoyl)-D-glucosaminyl-1,6-beta-D-2,3-bis(3-hydroxytetradecanoyl)-beta-D-glucosaminyl 1-phosphate

DLIPOm DihydrolipoamideM DMPP Dimethylallyl diphosphate DMZYMST 4,4-Dimethylzymosterol

DOL Dolichol

DOLMANP Dolichyl beta-D-mannosyl phosphate

DOLP Dolichyl phosphate
DOLPP Dehydrodolichol diphosphate

DOROA (S)-Dihydroorotate
DPCOA Dephospho-CoA
DPCOAm Dephospho-CoAM

DPTH 2-[3-Carboxy-3-(methylammonio)propyl]-L-histidine

DQT 3-Dehydroquinate

DR1P Deoxy-ribose 1-phosphate
DR5P 2-Deoxy-D-ribose 5-phosphate

DRIB Deoxyribose

DSAM S-Adenosylmethioninamine

DT Thymidine
DTB Dethiobiotin
DTBm DethiobiotinM
DTDP dTDP
DTMP dTMP

DTP 1-Deoxy-d-threo-2-pentulose

 DTTP
 dTTP

 DU
 Deoxyuridine

 DUDP
 dUDP

 DUMP
 dUMP

 DUTP
 dUTP

E4P D-Erythrose 4-phosphate

EPM Epimelibiose EPST Episterol

ER4P 4-Phospho-D-erythronate

ERGOST Ergosterol

ERTEOL Ergosta-5,7,22,24(28)-tetraenol ERTROL Ergosta-5,7,24(28)-trienol

ETH Ethanol
ETHM EthanolM
ETHM Ethanolamine

F1P D-Fructose 1-phosphate
F26P D-Fructose 2,6-bisphosphate
F6P beta-D-Fructose 6-phosphate

 FAD
 FAD

 FADH2m
 FADH2M

 FADm
 FADM

 FALD
 Formaldehyde

FDP beta-D-Fructose 1,6-bisphosphate

FERIM Ferricytochrome cM FEROm Ferrocytochrome cM

FEST Fecosterol

FGAM 2-(Formamido)-N1-(5'-phosphoribosyl)acetamidine

FGAR 5'-Phosphoribosyl-N-formylglycinamide

FGT S-Formylglutathione FKYN L-Formylkynurenine

FMN FMNM FMNM

FMRNAm N-Formylmethionyl-tRNAM

FOR Formate
FORm FormateM

FPP trans,trans-Farnesyl diphosphate

FRU D-Fructose

FUM

FTHF 10-Formyltetrahydrofolate
FTHFm 10-FormyltetrahydrofolateM
FUACAC 4-Fumarylacetoacetate
FUC beta-D-Fucose

Fumarate

FUMm FumarateM

G1P D-Glucose 1-phosphate
G6P alpha-D-Glucose 6-phosphate
GA1P D-Glucosamine 1-phosphate
GA6P D-Glucosamine 6-phosphate
GABA 4-Aminobutanoate

GABAL 4-Aminobutyraldehyde GABALm 4-AminobutyraldehydeM GABAm 4-AminobutanoateM GAL1P D-Galactose 1-phosphate GAR 5'-Phosphoribosylglycinamide **GBAD** 4-Guanidino-butanamide **GBAT** 4-Guanidino-butanoate GC gamma-L-Glutamyl-L-cysteine

GDP GDP GDPM GDPM GDPMAN GDPMAN GDPmannose GGL Galactosylglycerol GL Glycerol

GL3P sn-Glycerol 3-phosphate GL3Pm sn-Glycerol 3-phosphateM

GLAC D-Galactose

GLACL 1-alpha-D-Galactosyl-myo-inositol

**GLAL** Glycolaldehyde GLAM Glucosamine GLC alpha-D-Glucose GLCN Gluconate GLN L-Glutamine GLP Glycylpeptide GLT L-Glucitol GLU L-Glutamate

GLUGSAL
GLUGSALm
GLUm
GLUP
GLUP

L-Glutamate 5-semialdehyde
Glutamate 5-semialdehydeM
GlutamateM
alpha-D-Glutamyl phosphate

GLX Glyoxylate GLY Glycine **GLYCOGEN** Glycogen  $\operatorname{\mathsf{GLYm}}$ GlycineM **GLYN** Glycerone GMP GMP GN Guanine GNm GuanineM

GPP Geranyl diphosphate
GSN Guanosine
GSNm GuanosineM
GTP GTP
GTPM GTPM

GTRNA L-Glutamyl-tRNA(Glu)
GTRNAm L-Glutamyl-tRNA(Glu)M

GTRP P1,P4-Bis(5'-guanosyl) tetraphosphate

H2O2 H2O2

H2S Hydrogen sulfide

H2SO3 Sulfite

H3MCOA (S)-3-Hydroxy-3-methylglutaryl-CoA
H3MCOAm (S)-3-Hydroxy-3-methylglutaryl-CoAM
HACNm But-1-ene-1,2,4-tricarboxylateM

HACOA (3S)-3-Hydroxyacyl-CoA HAN 3-Hydroxyanthranilate HBA 4-Hydroxy-benzyl alcohol

HCIT 2-Hydroxybutane-1,2,4-tricarboxylate
HCITm 2-Hydroxybutane-1,2,4-tricarboxylateM

HCYS Homocysteine
HEXT H+EXT

HHTRNA L-Histidyl-tRNA(His)
HIB (S)-3-Hydroxyisobutyrate
HIBCOA (S)-3-Hydroxyisobutyryl-CoA

HICITM HomoisocitrateM HIS L-Histidine HISOL L-Histidinol

HISOLP L-Histidinol phosphate HKYN 3-Hydroxykynurenine

Hm H+M

HMB Hydroxymethylbilane

**HOMOGEN** Homogentisate

**HPRO** trans-4-Hydroxy-L-proline

**HSER** L-Homoserine tRNA(His) HTRNA HYXAN Hypoxanthine IAC Indole-3-acetate IAD Indole-3-acetamide **IBCOA** 2-Methylpropanoyl-CoA

ICIT Isocitrate ICITm IsocitrateM IDP IDP IDPm IDPM

IGP Indoleglycerol phosphate

**IGST** 4,4-Dimethylcholesta-8,14,24-trienol **IIMZYMST** Intermediate\_Methylzymosterol\_II Intermediate\_Zymosterol\_II **IIZYMST** 

ILE L-Isoleucine ILEm L-IsoleucineM

3-(Imidazol-4-yl)-2-oxopropyl phosphate **IMACP** 

IMP IMP

**IMZYMST** Intermediate\_Methylzymosterol\_I

INAC Indoleacetate INS Inosine

**IPC** Inositol phosphorylceramide

**IPPMAL** 2-Isopropylmalate **IPPMALm** 2-IsopropylmalateM **IPPP** Isopentenyl diphosphate a-Iminosuccinate ISUCC ITCCOAm Itaconyl-CoAM ITCm ItaconateM ITP ITP

ITPm ITPM

**IVCOA** 3-Methylbutanoyl-CoA Intermediate\_Zymosterol\_I **IZYMST** 

Potassium K KYN L-Kynurenine LAC (R)-Lactate LACALm (S)-LactaldehydeM  $\mathsf{LACm}$ (R)-LactateM

LCCA a Long-chain carboxylic acid

LEU L-Leucine LEUm L-LeucineM

LGT (R)-S-Lactoylglutathione LGTm (R)-S-LactoylglutathioneM

LIPIV 2,3,2',3'-tetrakis(3-hydroxytetradecanoyl)-D-glucosaminyl-1,6-beta-D-glucosamine 1,4'-bisphosphate

LIPOm LipoamideM LIPX Lipid X  $\mathsf{LLACm}$ (S)-LactateM LLCT L-Cystathionine LLTRNA L-lysyl-tRNA(Lys) LLTRNAm L-lysyl-tRNA(Lys)M LNST Lanosterol

tRNA(Lys) LTRNA LTRNAm tRNA(Lys)M LYS L-Lysine LYSm L-LysineM

MAACOA a-Methylacetoacetyl-CoA MACAC 4-Maleylacetoacetate MACOA 2-Methylprop-2-enoyl-CoA MAL Malate

MALACP Malonyl-[acyl-carrier protein] MALACPm Malonyl-[acyl-carrier protein]M

MALCOA Malonyl-CoA MalateM MALm MALT Malonate MALTm MalonateM MAN alpha-D-Mannose

MAN1P alpha-D-Mannose 1-phosphate

MAN2PD beta-D-Mannosyldiacetylchitobiosyldiphosphodolichol

MAN6P D-Mannose 6-phosphate MANNAN MBCOA Methylbutyryl-CoA 2-Methylbut-2-enoyl-CoA MCCOA MCRCOA 2-Methylbut-2-enoyl-CoA MDAP Meso-diaminopimelate

MELI Melibiose MELT Melibiitol MET L-Methionine METH Methanethiol

**METHF** 5,10-Methenyltetrahydrofolate  $\mathsf{METHFm}$ 5,10-MethenyltetrahydrofolateM **METTHF** 5,10-Methylenetetrahydrofolate **METTHFm** 5,10-MethylenetetrahydrofolateM MGCOA 3-Methylglutaconyl-CoA

MHIS N(pai)-Methyl-L-histidine MHVCOA a-Methyl-b-hydroxyvaleryl-CoA

MI myo-Inositol

MI1P 1L-myo-Inositol 1-phosphate

MIP2C Inositol-mannose-P-inositol-P-ceramide

MIPC Mannose-inositol-P-ceramide

MK Menaquinone MLT Maltose

MMCOA Methylmalonyl-CoA MMET S-Methylmethionine

MMS (S)-Methylmalonate semialdehyde

MNT D-Mannitol

MNT6P D-Mannitol 1-phosphate MTHF 5-Methyltetrahydrofolate MTHFm 5-MethyltetrahydrofolateM

Methylglyoxal MTHGXL MTHN Methane MTHNm MethaneM

**MTHPTGLU** 5-Methyltetrahydropteroyltri-L-glutamate

 $\mathsf{MTRNAm}$ L-Methionyl-tRNAM MVL (R)-Mevalonate MVLm (R)-MevalonateM MYOI myo-Inositol **MZYMST** 4-Methylzymsterol

N4HBZ 3-Nonaprenyl-4-hydroxybenzoate

NA Sodium

NAAD Deamino-NAD+ NAADm Deamino-NAD+M NAC Nicotinate NACm NicotinateM NAD NAD+ NADH NADH NADHm NADHM NAD+M NADm NADP NADP+ **NADPH** NADPH NADPHm NADPHM NADPm NADP+M

NAG N-Acetylglucosamine

NAGA1P N-Acetyl-D-glucosamine 1-phosphate NAGA6P N-Acetyl-D-glucosamine 6-phosphate

 $\mathsf{NAGLUm}$ N-Acetyl-L-glutamateM

NAGLUPm N-Acetyl-L-glutamate 5-phosphateM NAGLUSm N-Acetyl-L-glutamate 5-semialdehydeM

NAM Nicotinamide NAMm NicotinamideM

NAMN Nicotinate D-ribonucleotide NAMNm Nicotinate D-ribonucleotideM NAORNm N2-Acetyl-L-ornithineM

NH3 NH3 NH3M NH3m NH4 NH4+

OFP

NPP all-trans-Nonaprenyl diphosphate NPPm all-trans-Nonaprenyl diphosphateM **NPRAN** N-(5-Phospho-D-ribosyl)anthranilate

Oxidized flavoprotein

02 Oxygen OxygenM O2m OA Oxaloacetate OACOA 3-Oxoacyl-CoA OAHSER O-Acetyl-L-homoserine OAm OxaloacetateM OBUT 2-Oxobutanoate OBUTm 2-OxobutanoateM

OGT Oxidized glutathione

OHB 2-Oxo-3-hydroxy-4-phosphobutanoate

OHm HO-M

OICAP 3-Carboxy-4-methyl-2-oxopentanoate
OICAPm 3-Carboxy-4-methyl-2-oxopentanoateM

OIVAL (R)-2-Oxoisovalerate
OIVALm (R)-2-OxoisovalerateM
OMP Orotidine 5'-phosphate
OMVAL 3-Methyl-2-oxobutanoateM
OMVALm 3-Methyl-2-oxobutanoateM

OPEP Oligopeptide
ORN L-Ornithine
ORNm L-OrnithineM
OROA Orotate

OSLHSER O-Succinyl-L-homoserine

OSUC Oxalosuccinate
OSUCm OxalosuccinateM
OTHIO Oxidized thioredoxin
OTHIOm Oxidized thioredoxinM
OXA Oxaloglutarate
OXAm OxaloglutarateM

P5C (S)-1-Pyrroline-5-carboxylate P5Cm (S)-1-Pyrroline-5-carboxylateM

P5P Pyridoxine phosphate PΑ Phosphatidate PABA 4-Aminobenzoate PAC Phenylacetic acid PAD 2-Phenylacetamide PALCOA Palmitoyl-CoA PAm PhosphatidateM PANT (R)-Pantoate PANTm (R)-PantoateM

PAP Adenosine 3',5'-bisphosphate PAPS 3'-Phosphoadenylylsulfate

PBG Porphobilinogen
PC Phosphatidylcholine
PC2 Sirohydrochlorin
PCHO Choline phosphate
PDLA Pyridoxamine

PDLA5P Pyridoxamine phosphate

PDME Phosphatidyl-N-dimethylethanolamine

PE Phosphatidylethanolamine
PEm PhosphatidylethanolamineM
PEP Phosphoenolpyruvate

PEPD Peptide

PEPm PhosphoenolpyruvateM PEPT Peptide

PETHM Ethanolamine phosphate PGm PhosphatidylglycerolM

PGPm PhosphatidylglycerophosphateM PHC L-1-Pyrroline-3-hydroxy-5-carboxylate

PHE L-Phenylalanine
PHEN Prephenate

PHP 3-Phosphonooxypyruvate

PHPYR Phenylpyruvate

PHSER O-Phospho-L-homoserine
PHSP Phytosphingosine 1-phosphate
PHT O-Phospho-4-hydroxy-L-threonine

PI Orthophosphate
PIm OrthophosphateM
PIME Pimelic Acid

PINS 1-Phosphatidyl-D-myo-inositol

PINS4P 1-Phosphatidyl-1D-myo-inositol 4-phosphate PINSP 1-Phosphatidyl-1D-myo-inositol 3-phosphate

PL Pyridoxal Pyridoxal phosphate

PMME Phosphatidyl-N-methylethanolamine

PMVL (R)-5-Phosphomevalonate

PNTO (R)-Pnospnomevalona
PNTO (R)-Pantothenate
PPHG Protoporphyrinogen IX
PPHGm Protoporphyrinogen IXM

PPI Pyrophosphate
PPIM PyrophosphateM
PPIXM ProtoporphyrinM

**PPMAL** 2-Isopropylmaleate **PPMVL** (R)-5-Diphosphomevalonate PRAM 5-Phosphoribosylamine PRBAMP N1-(5-Phospho-D-ribosyl)-AMP **PRBATP** N1-(5-Phospho-D-ribosyl)-ATP

**PRFICA** 1-(5'-Phosphoribosyl)-5-formamido-4-imidazolecarboxamide

PRFP 5-(5-Phospho-D-ribosylaminoformimino)-1-(5-phosphoribosyl)-imidazole-4-carboxamide

PRLP N-(5'-Phospho-D-1'-ribulosylformimino)-5-amino-1-(5"-phospho-D-ribosyl)-4-imidazolecarboxamide

PRO L-Proline PROm L-ProlineM **PROPCOA** Propanoyl-CoA

PRPP 5-Phospho-alpha-D-ribose 1-diphosphate PRPPm 5-Phospho-alpha-D-ribose 1-diphosphateM

PS Phosphatidylserine PSm PhosphatidylserineM **PSPH** Phytosphingosine PTHm HemeM PTRC Putrescine

Putrescine PURI5P Pseudouridine 5'-phosphate

PYR Pyruvate **PYRDX** Pyridoxine PYRm PyruvateM Q Ubiquinone-9

**PTRSC** 

QA Pyridine-2,3-dicarboxylate QAm Pyridine-2,3-dicarboxylateM

QH2 Ubiquinol QH2m UbiquinolM Qm Ubiquinone-9M R1P D-Ribose 1-phosphate R5P D-Ribose 5-phosphate

RADP 4-(1-D-Ribitylamino)-5-amino-2,6-dihydroxypyrimidine

RAF Raffinose RFP Reduced flavoprotein **RGT** Glutathione **RGTm** GlutathioneM RIB D-Ribose **RIBFLAVm** RiboflavinM

**RIBOFLAV** Riboflavin

RIPm alpha-D-Ribose 1-phosphateM RL5P D-Ribulose 5-phosphate

RMN D-Rhamnose **RTHIO** Reduced thioredoxin Reduced thioredoxinM RTHIOm

Sulfur

S17P Sedoheptulose 1,7-bisphosphate S23E (S)-2,3-Epoxysqualene S7P Sedoheptulose 7-phosphate SACP N6-(L-1,3-Dicarboxypropyl)-L-lysine SAH S-Adenosyl-L-homocysteine SAHm S-Adenosyl-L-homocysteineM

SAICAR 1-(5'-Phosphoribosyl)-5-amino-4-(N-succinocarboxamide)-imidazole

S-Adenosyl-L-methionine SAM SAMm S-Adenosyl-L-methionineM

**SAMOB** S-Adenosyl-4-methylthio-2-oxobutanoate SAPm S-AminomethyldihydrolipoylproteinM

SER L-Serine SERm L-SerineM SLF Sulfate SLFm SulfateM SME Shikimate

SME5P Shikimate 3-phosphate

SOR Sorbose

SOR1P Sorbose 1-phosphate

SOT D-Sorbitol SPH Sphinganine SPMD Spermidine **SPRM** Spermine SPRMD Spermidine Squalene SQL SUC Sucrose SUCC Succinate SuccinateM SUCCm SUCCOAm Succinyl-CoAM SUCCSAL Succinate semialdehyde
T3P1 D-Glyceraldehyde 3-phosphate
T3P2 Glycerone phosphate
T3P2m Glycerone phosphateM
TAG16P D-Tagatose 1,6-bisphosphate
TAG6P D-Tagatose 6-phosphate

TAGLY Triacylglycerol TCOA Tetradecanoyl-CoA

TGLP N-Tetradecanoylglycylpeptide

THF Tetrahydrofolate
THFG Tetrahydrofolyl-[Glu](n)
THFm TetrahydrofolateM

THIAMIN Thiamin

THMP Thiamin monophosphate THPTGLU Tetrahydropteroyltri-L-glutamate

THR L-Threonine
THRm L-ThreonineM
THY Thymine

THZ 5-(2-Hydroxyethyl)-4-methylthiazole
THZP 4-Methyl-5-(2-phosphoethyl)-thiazole
TPI D-myo-inositol 1,4,5-trisphosphate

TPP Thiamin diphosphate
TPPP Thiamin triphosphate
TRE alpha,alpha-Trehalose

TRE6P alpha,alpha'-Trehalose 6-phosphate

TRNA tRNA
TRNAG tRNA(Glu)
TRNAGm tRNA(Glu)M
TRNAm tRNAM
TRP L-Tryptophan
TRPm L-TryptophanM

TRPTRNAm L-Tryptophanyl-tRNA(Trp)M

TYR L-Tyrosine UDP UDP UDPG UDPglucose

UDP-2,3-bis(3-hydroxytetradecanoyl)glucosamine
UDPG2A
UDP-3-O-(3-hydroxytetradecanoyl)-D-glucosamine
UDPG2AA
UDP-3-O-(3-hydroxytetradecanoyl)-N-acetylglucosamine

UDPGAL UDP-D-galactose

UDPNAG UDP-N-acetyl-D-galactosamine UDPP Undecaprenyl diphosphate

UGC (-)-Ureidoglycolate

UMP UMP

UPRG Uroporphyrinogen III

URA Uracil UREA Urea

UREAC Urea-1-carboxylate

URI Uridine
UTP
VAL L-Valine

X5P D-Xylose-5-phosphate

XAN Xanthine

XMP Xanthosine 5'-phosphate

XTSINE Xanthosine
XTSN Xanthosine
XUL D-Xylulose
XYL D-Xylose
ZYMST Zymosterol