

Supplemental data S1 (cont.)

Names and abbreviations of metabolites in the mitochondrial network

Abbreviation	Full name	Formula
10fthf	10-Formyltetrahydrofolate	C ₂₀ H ₂₂ N ₇ O ₇
12dgr_m	1,2-Diacylglycerol	C ₃₉ H ₇₀ O ₅
13dpg	3-Phospho-D-glyceroyl phosphate	C ₃ H ₄ O ₁₀ P ₂
2mop	2-Methyl-3-oxopropanoate	C ₄ H ₅ O ₃
2pg	D-Glycerate 2-phosphate	C ₃ H ₄ O ₇ P
34hpp	3-(4-Hydroxyphenyl)pyruvate	C ₉ H ₇ O ₄
3hacoa	(S)-3-Hydroxyacyl-CoA	C ₂₄ H ₃₅ N ₇ O ₁₈ P ₃ RS
3oacoa	3-Oxoacyl-CoA	C ₂₄ H ₃₃ N ₇ O ₁₈ P ₃ RS
3pg	3-Phospho-D-glycerate	C ₃ H ₄ O ₇ P
5aop	5-Amino-4-oxopentanoate	C ₅ H ₉ N ₃ O
5fthf	5-Formyltetrahydrofolate	C ₂₀ H ₂₁ N ₇ O ₇
aacoa	Acetoacetyl-CoA	C ₂₅ H ₃₆ N ₇ O ₁₈ P ₃ S
acac	Acetoacetate	C ₄ H ₅ O ₃
accoa	Acetyl-CoA	C ₂₃ H ₃₄ N ₇ O ₁₇ P ₃ S
adp	ADP	C ₁₀ H ₁₂ N ₅ O ₁₀ P ₂
aglyc3p_m	1-acyl-sn-glycerol 3-phosphate, mitochondria	C ₂₁ H ₃₈ O ₇ P
ahcys	S-Adenosyl-L-homocysteine	C ₁₄ H ₂₀ N ₆ O ₅ S
akg	2-Oxoglutarate	C ₅ H ₄ O ₅
amet	S-Adenosyl-L-methionine	C ₁₅ H ₂₃ N ₆ O ₅ S
amp	AMP	C ₁₀ H ₁₂ N ₅ O ₇ P
arg-L	L-Arginine	C ₆ H ₁₅ N ₄ O ₂
argsuc	N(omega)-(L-Arginino)succinate	C ₁₀ H ₁₇ N ₄ O ₆
ascb-L	L-Ascorbate	C ₆ H ₈ O ₆
asp-L	L-Aspartate	C ₄ H ₆ N ₂ O ₄
atp	ATP	C ₁₀ H ₁₂ N ₅ O ₁₃ P ₃
c204	nC _{20:4}	C ₂₀ H ₃₁ O ₂
c204coa	C _{20:4} -CoA	C ₄₁ H ₆₂ N ₇ O ₁₇ P ₃ S
c204crn	C _{20:4} carnitine	C ₂₇ H ₄₅ N ₄ O
c226	nC _{22:6}	C ₂₂ H ₃₁ O ₂
c226coa	C _{22:6} -CoA	C ₄₃ H ₆₂ N ₇ O ₁₇ P ₃ S
c226crn	C _{22:6} CoA	C ₂₉ H ₄₅ N ₄ O
cbp	Carbamoyl phosphate	CH ₂ N ₂ O ₅ P
cdp	CDP	C ₉ H ₁₂ N ₃ O ₁₁ P ₂
cdpchol	CDPcholine	C ₁₄ H ₂₅ N ₄ O ₁₁ P ₂
cdpdag_m	CDP-Diacylglycerol, mitochondria	C ₄₈ H ₈₁ N ₃ O ₁₅ P ₂
cdpea	CDPethanolamine	C ₁₁ H ₁₉ N ₄ O ₁₁ P ₂
chol	Choline	C ₅ H ₁₄ N ₂ O
cholp	Choline phosphate	C ₅ H ₁₃ N ₂ O ₄ P
cit	Citrate	C ₆ H ₅ O ₇
citr-L	L-Citrulline	C ₆ H ₁₃ N ₃ O ₃
clpn_m	cardiolipin, mitochondria	C ₈₁ H ₁₄₄ O ₁₇ P ₂
cmp	CMP	C ₉ H ₁₂ N ₃ O ₈ P
co2	CO ₂	CO ₂
coa	Coenzyme A	C ₂₁ H ₃₂ N ₇ O ₁₆ P ₃ S
cpppg3	Coproporphyrinogen III	C ₃₆ H ₄₀ N ₄ O ₈
creat	Creatine	C ₄ H ₉ N ₃ O ₂
crn	L-Carnitine	C ₇ H ₁₅ N ₃ O
ctp	CTP	C ₉ H ₁₂ N ₃ O ₁₄ P ₃
cys-L	L-Cysteine	C ₃ H ₇ N ₂ O ₂ S
dgmp	dGMP	C ₁₀ H ₁₂ N ₅ O ₇ P
dgsn	Deoxyguanosine	C ₁₀ H ₁₃ N ₅ O ₄

dhap	Dihydroxyacetone phosphate	C3H5O6P
dhdascb	Dehydroascorbate	C6H6O6
dhor-S	(S)-Dihydroorotate	C5H5N2O4
dtmp	dTMP	C10H13N2O8P
dump	dUMP	C9H11N2O8P
dutp	dUTP	C9H11N2O14P3
f6p	D-Fructose 6-phosphate	C6H11O9P
f6p-B	beta-D-Fructose 6-phosphate	C6H11O9P
facoa_m	Average fatty acid of human heart mitochondria	C39H63N7O17P3S
fad	FAD	C27H31N9O15P2
fadh2	FADH2	C27H33N9O15P2
fdp	D-Fructose 1,6-bisphosphate	C6H10O12P2
fe2	Fe2+	Fe
ficytC	Ferricytochrome c	C42H54FeN8O6S2
focytC	Ferrocyclochrome C	C42H54FeN8O6S2
for	Formate	CH1O2
fum	Fumarate	C4H2O4
g3p	Glyceraldehyde 3-phosphate	C3H5O6P
g6p	D-Glucose 6-phosphate	C6H11O9P
g6p-B	beta-D-glucose 6-phosphate	C6H11O9P
gdp	GDP	C10H12N5O11P2
glc-D	D-Glucose	C6H12O6
glucy	gamma-L-Glutamyl-L-cysteine	C8H13N2O5S
glu-L	L-Glutamate	C5H8NO4
gly	Glycine	C2H5NO2
glyc	Glycerol	C3H8O3
glyc3p	Glycerol 3-phosphate	C3H7O6P
gthox	Oxidized glutathione	C20H30N6O12S2
gthrd	Reduced glutathione	C10H16N3O6S
gtp	GTP	C10H12N5O14P3
gudac	Guanidinoacetate	C3H7N3O2
h	H+	H
h2co3	carbonic acid	H2CO3
h2o	H2O	H2O
h2o2	Hydrogen peroxide	H2O2
hco3	Bicarbonate	CHO3
hdca	Hexadecanoate (n-C16:0)	C16H31O2
hmbil	Hydroxymethylbilane	C40H38N4O17
hmgcoa	Hydroxymethylglutaryl-CoA	C27H39N7O20P3S
icit	Isocitrate	C6H5O7
idp	IDP	C10H11N4O11P2
itp	ITP	C10H11N4O14P3
lac-L	L-Lactate	C3H5O3
lys-L	L-Lysine	C6H15N2O2
mal-L	L-Malate	C4H4O5
methf	5,10-Methenyltetrahydrofolate	C20H20N7O6
mlthf	5,10-Methylenetetrahydrofolate	C20H22N7O6
mmcoa-S	(S)-Methylmalonyl-CoA	C25H35N7O19P3S
nad	Nicotinamide adenine dinucleotide	C21H26N7O14P2
nadh	Nicotinamide adenine dinucleotide - reduced	C21H27N7O14P2
nadp	Nicotinamide adenine dinucleotide phosphate	C21H25N7O17P3
nadph	Nicotinamide adenine dinucleotide phosphate - reduced	C21H26N7O17P3
nh4	Ammonium	H4N
o2	O2	O2
o2-	Superoxide anion	O2
oaa	Oxaloacetate	C4H2O5
ocdca	octadecanoate (n-C18:0)	C18H35O2

ocdcea	octadecenoate (n-C18:1)	C18H33O2
ocdcya	octadecynoate (n-C18:2)	C18H31O2
ocdycacoa	Octadecynoyl-CoA (n-C18:2CoA)	C39H62N7O17P3S
ocdycrn	octadecynoyl carnitine	C25H45NO4
odecoa	Octadecenoyl-CoA (n-C18:1CoA)	C39H64N7O17P3S
odecrn	octadecenoyl carnitine	C25H47NO4
oh1	hydroxide ion	HO
orn	Ornithine	C5H13N2O2
orot	Orotate	C5H3N2O4
pa_m	phosphatidate, mitochondria	C39H69O8P1
pc_m	phosphatidylcholine, mitochondria	C5H3N2O4
pcreat	Phosphocreatine	C4H9N3O5P
pe_m	phosphatidylethanolamine, mitochondria	C41H76N1O8P1
pep	Phosphoenolpyruvate	C3H2O6P
pg_m	phosphatidylglycerol	C42H76O10P
pgp_m	phosphatidylglycerolphosphate, mitochondria	C42H75O13P2
pHEME	Protoheme	C34H30FeN4O4
pi	Phosphate	HO4P
pmitcoa	Palmitoyl-CoA (n-C16:0CoA)	C37H62N7O17P3S
pmitcrn	L-Palmitoylcarnitine	C23H45NO4
ppbng	Porphobilinogen	C10H13N2O4
ppcoa	Propanoyl-CoA	C24H36N7O17P3S
ppi	Diphosphate	HO7P2
ppp9	Protoporphyrin	C34H32N4O4
pppg9	Protoporphyrinogen IX	C34H38N4O4
ps_m	phosphatidylserine	C42H75N1O10P1
pyr	Pyruvate	C3H3O3
q10	Ubiquinone-10	C59H90O4
q10h2	Ubiquinol-10	C59H92O4
ser-L	L-Serine	C3H7NO3
stcoa	Stearoyl-CoA (n-C18:0CoA)	C39H66N7O17P3S
stcrn	stearoylcarnitine	C25H49NO4
succ	Succinate	C4H4O4
succoa	Succinyl-CoA	C25H35N7O19P3S
thf	5,6,7,8-Tetrahydrofolate	C19H22N7O6
thymd	Thymidine	C10H14N2O5
tyr-L	L-Tyrosine	C9H11NO3
udp	UDP	C9H11N2O12P2
uppg3	Uroporphyrinogen III	C40H36N4O16
urea	Urea	CH4N2O