

**Supplementary Table S1**

<b>Metabolite</b>	<b>Gene Symbol</b>	<b>EC Number</b>	<b>Entrez Gene ID</b>	<b>Gene Description</b>
<b>Adenosine</b>	ADA	3.5.4.4	100	adenosine deaminase
	DCK	2.7.1.74	1633	deoxycytidine kinase
	NP	2.4.2.1; 3.4.17.1	4860	nucleoside phosphorylase
	NT3	3.1.3.5	4877	3'-nucleotidase
	NT5C	3.1.3.5	30833	5', 3'-nucleotidase, cytosolic
	NT5C1A	3.1.3.5	84618	5'-nucleotidase, cytosolic IA
	NT5C1B	3.1.3.5	93034	5'-nucleotidase, cytosolic IB
	NT5C2	3.1.3.5	22978	5'-nucleotidase, cytosolic II
	NT5C3	3.1.3.5	51251	5'-nucleotidase, cytosolic III
	NT5E	3.1.3.5	4907	5'-nucleotidase, ecto (CD73)
<b>Glutathione</b>	NT5M	3.1.3.5	56953	5',3'-nucleotidase, mitochondrial
	GGT1	2.3.2.2	2678	gamma-glutamyltransferase 1
	GGT2	2.3.2.2	728441	gamma-glutamyltransferase 2
	GGT3P	2.3.2.2	2679	gamma-glutamyltransferase 3
	GGTL3	2.3.2.2	2686	gamma-glutamyltransferase-like 3
	GGTL4	2.3.2.2	91227	gamma-glutamyltransferase-like 4
	GGTLA1	2.3.2.2	2687	gamma-glutamyltransferase-like activity 1
	GPX1	1.11.1.9	2876	glutathione peroxidase 1
	GPX2	1.11.1.9	2877	glutathione peroxidase 2 (gastrointestinal)
	GPX3	1.11.1.9	2878	glutathione peroxidase 3 (plasma)
	GPX4	1.11.1.12		
		1.11.1.9	2879	glutathione peroxidase 4 (phospholipid hydroperoxidase)
	GPX5	1.11.1.9	2880	glutathione peroxidase 5 (epididymal androgen-related protein)
	GPX6	1.11.1.9	257202	glutathione peroxidase 6 (olfactory)
	GPX7	1.11.1.9	2882	glutathione peroxidase 7
	GSR	1.8.1.7	2936	glutathione reductase
	GSS	6.3.2.3	2937	glutathione synthetase
	GSTA1	2.5.1.18	2938	glutathione S-transferase A1

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<b>Glutathione</b>	GSTA2	2.5.1.18	2939	glutathione S-transferase A2
	GSTA3	2.5.1.18	2940	glutathione S-transferase A3
	GSTA4	2.5.1.18	2941	glutathione S-transferase A4
	GSTA5	2.5.1.18	221357	glutathione S-transferase A5
	GSTK1	2.5.1.18	373156	glutathione S-transferase kappa 1
	GSTM1	2.5.1.18	2944	glutathione S-transferase M1
	GSTM2	2.5.1.18	2946	glutathione S-transferase M2 (muscle)
	GSTM3	2.5.1.18	2947	glutathione S-transferase M3 (brain)
	GSTM4	2.5.1.18	2948	glutathione S-transferase M4
	GSTM5	2.5.1.18	2949	glutathione S-transferase M5
	GSTO1	2.5.1.18	9446	glutathione S-transferase omega 1
	GSTO2	2.5.1.18	119391	glutathione S-transferase omega 2
	GSTP1	2.5.1.18	2950	glutathione S-transferase pi
	GSTT1	2.5.1.18	2952	glutathione S-transferase theta 1
	GSTT2	2.5.1.18	2953	glutathione S-transferase theta 2
<b>PtdSer</b>	GSTZ1	2.5.1.18;	2954	glutathione transferase zeta 1 (maleylacetoacetate isomerase)
	MGST1	2.5.1.18	4257	microsomal glutathione S-transferase 1
	MGST2	2.5.1.18	4258	microsomal glutathione S-transferase 2
	MGST3	2.5.1.18	4259	microsomal glutathione S-transferase 3
	AASDHPPPT	1.2.1.31; 2.7.8.-	60496	amino adipate-semialdehyde dehydrogenase-phosphopantetheinyl transferase
	JMJD7-PLA2G4B	3.1.1.4	8681	JMJD7-PLA2G4B readthrough
	PISD	4.1.1.65	23761	phosphatidylserine decarboxylase
	PLA2G10	3.1.1.4	8399	phospholipase A2, group X
	PLA2G12A	3.1.1.4	81579	phospholipase A2, group XIIA
	PLA2G12B	3.1.1.4	84647	phospholipase A2, group XIIIB
<b>PLA2G1B</b>	PLA2G1B	3.1.1.4	5319	phospholipase A2, group IB (pancreas)
	PLA2G2A	3.1.1.4	5320	phospholipase A2, group IIA (platelets, synovial fluid)
	PLA2G2D	3.1.1.4	26279	phospholipase A2, group IID

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<b>PtdSer</b>	PLA2G2E	3.1.1.4	30814	phospholipase A2, group IIE
	PLA2G2F	3.1.1.4	64600	phospholipase A2, group IIF
	PLA2G3	3.1.1.4	50487	phospholipase A2, group III
	PLA2G4A	3.1.1.4;		
		3.1.1.5	5321	phospholipase A2, group IVA (cytosolic, calcium-dependent)
	PLA2G4C	3.1.1.4	8605	phospholipase A2, group IVC (cytosolic, calcium-independent)
	PLA2G4D	3.1.1.4	283748	phospholipase A2, group IVD (cytosolic)
	PLA2G4E	3.1.1.4	123745	phospholipase A2, group IVE
	PLA2G4F	3.1.1.4	255189	phospholipase A2, group IVF
	PLA2G5	3.1.1.4	5322	phospholipase A2, group V
<b>Sphingomyelin</b>	PLD1	3.1.4.4	5337	phospholipase D1, phosphatidylcholine-specific
	PLD2	3.1.4.4	5338	phospholipase D2
	ENPP7	3.1.4.12	339221	ectonucleotide pyrophosphatase/phosphodiesterase 7
	SGMS1	2.7.8.27;		
		2.7.8.3	259230	sphingomyelin synthase 1
	SMPD1	3.1.4.12;		
		3.1.4.41	6609	sphingomyelin phosphodiesterase 1, acid lysosomal
	SMPD2	3.1.4.12	6610	sphingomyelin phosphodiesterase 2, neutral membrane (neutral sphingomyelinase)
	SMPD3	3.1.4.12	55512	sphingomyelin phosphodiesterase 3, neutral membrane (neutral sphingomyelinase II)
	SMPD4	3.1.4.12	55627	sphingomyelin phosphodiesterase 4, neutral membrane (neutral sphingomyelinase-3)