

## Supplementary Tables S1-S2.

**Table S1. Primers and vectors (relevant restriction sites are underlined)**

PCR primers		
target	name primer(s)	sequence
<i>Slc25a17</i> (intron 1)	<i>MmPMP34</i> -in1-s-a	5'-AGCTTGGTAACCAGTGTGG
	<i>MmPMP34</i> -in1-s-b	5'-CTGGCACCTAGCACCTCTTC
	<i>MmPMP34</i> -in1-s-c	5'-TATCCAATGCCCTCTTCTGG
	<i>MmPMP34</i> -in1-s-d	5'-TCCTTCCCTGGAACCCTTCTT
	<i>MmPMP34</i> -in1-s-e	5'-CCCCTCCTACAGAGAGACACC
	<i>MmPMP34</i> -in1-s-f	5'-CAAGCTTCCCAGAACAGAGG
	<i>MmPMP34</i> -in1-s-g	5'-GCACAAACACCATGACCAAG
	<i>MmPMP34</i> -in1-s-h	5'-CTTGGCTTTCCAGCTGTAGG
	<i>MmPMP34</i> -in1-s-i	5'-CCAGAGGCTGCTACATTTC
	<i>MmPMP34</i> -in1-s-j	5'-CTTTAGCCTCTGGGCTCTCC
	<i>MmPMP34</i> -in1-s-k	5'-AGGCAGGTTGGGAATTTAGC
	<i>MmPMP34</i> -in1-r-e	5'-CTCTTCCGAAGGTCCTGAGC
βgeo	Gal-s	5'-CGAATACCTGTTCCGTCATAGC
	Gal-r	5'-AGTGGCAACATGGAAATCG
	GAL-3s	5'-CGAATACCTGTTCCGTCATAGCG
	GAL-3r	5'-ACCACTACCATCAATCCGGTAGG
PARP1	HsPARP1-1s-EP	5'-AAGAATTC <u>ACTGCAGCTTCTGGAGGACGACAAG</u>
	HsPARP1-2r-XB	5'-AACTCGAGATCTAAAGTTTGGACTTCCACAGGGAGGTCTTAAAAATTG
real time PCR primers		
target	name primer(s)	sequence
<i>Slc25a17</i>	PMP34-1	fw 5'-GGCCTCTGTGCTGTCCTACGAAAG; rev 5'- GACTCCGCTCTGGGTGGTAA
<i>Slc25a17</i>	PMP34-2	fw 5'-TGGCACCATGGCCTCTGT; rev 5'-AGTGTGACTGCCATGACAGTGTT

		probe TCCTACGAAAGTCTGGTACACGCCGTGGCCGGAGCCGTG
<i>Cat</i>	Catalase	fw 5'-CGCAGAGACCTGATGTCCTGA; rev 5'- CCCC GCGGTCATGAATATTA probe 5'-CACCGGAGGCGGGAACCCAATA
<i>Acox1</i>	ACOX1	fw 5'-CACGCACATCTTGGATGGTAGT; rev 5'- TTCGTCAGAATCAAGTTCTCGATT probe 5'-ACACCCGGCGCCGTCGAG
<i>Ehhadh</i>	MFP1	fw 5'-GCTGGAGCCCAGTGACTACCT; rev 5'-CCAAGCTTTGCCATTCTTTCA probe 5'-TGGTTGCCAGGGAAGCCCTC
<i>Cyp4A10</i>	CytP450A10	fw 5'-GCCAAATCCAGAGGTGTTTGA; rev 5'- AGCAAATTGTTTCCCAATGCA probe 5'-AGACTCTCCCCGACACAGCCACTCATTC
<i>Cpt1β</i>	CPT1β	fw 5'-CTGAGACACATCACCGTCTGGAA; rev 5'- CACCCCTAAGGATGCCATTCT probe 5'- CAACTCCTGGAAGAAACGCCTTATTCGAATC
<i>Actb</i>	actin beta	fw 5'-AGAGGGAAATCGTGCGTGAC; rev 5'-CAATAGTGATGACCTGGCCGT probe 5'-CACTGCCGCATCCTCTTCCTCCC
vectors		
<b>name</b>	<b>insert</b>	<b>generation, reference or source</b>
pCR®-XL-TOPO	--	Invitrogen
pCMVβ	β-galactosidase	Clontech
pCMV-Tag2B		Stratagene
pTW45	full length mouse PMP34 cDNA	Wylin T, Baes M, Brees C, Mannaerts GP, Fransen M, Van Veldhoven PP (1998) Eur J Biochem 258, 332-338; primer amplified open reading frame inserted into <i>EcoRI/NotI</i> restricted pBluescript; Wylin T and Van Veldhoven PP, unpublished data.
pRSVL	luciferase	de Wet JR, Wood KV, DeLuca M, Helinski DR, Subramani S. (1987) Mol Cell Biol. 7, 725-737.
pGL3-CMV-luciferase	luciferase	derived from pGL3 (Promega), expression controlled by CMV promotor; Ir. N. Hersmus (Laboratory for Neurobiology, K.U.Leuven)
pRSV-SV40T	SV40 large T antigen	S. Subramani (University of California, San Diego, USA)
pGT1.8IRESβGeo(S)	βgeo	W. Skarnes (Wellcome Trust Sanger Institute, Cambridge, UK)
pMF1706	roGFP-SKL	Ivashchenko O, Van Veldhoven PP, Brees C, Ho YS, Terlecky SR, Fransen M (2011) Mol Biol Cell 22, 1440–1451.



**Table S2. Plasmalogen content of tissues of wild type and PMP34 knock out mice.**

Plasmalogens were analyzed in lipid extracts of tissues obtained from age matched male adult mice fed a standard (-) or phytol (+) enriched diet, and related to the total amount of phospholipids as described in the Method section. Values are mean  $\pm$  SD when measurements were performed on tissues derived from two mice, otherwise represent determinations on a single mouse.

		plasmalogens (nmol/ $\mu$ mol phospholipid)			
genotype		wild type		PMP34 knock out	
phytol		-	+	-	+
liver		8.97 $\pm$ 0.5	9.18 $\pm$ 0.4	8.93 $\pm$ 0.5	8.30 $\pm$ 2.7
cerebrum		229	256 $\pm$ 22.0	247	241 $\pm$ 12.0
heart		158	123	162	91.6 $\pm$ 7.8