

Table S1. Comparison of lipid metabolism genes regulated by enforced expression of ATF6 α (1-373) and XBP1(S) in NIH-3T3 fibroblasts

Gene symbol	Gene title	ATF6 α (1-373) versus empty fold change	XBP1(S) versus empty fold change
<i>Chka</i>	choline kinase alpha	16.88	1.03
<i>Chkb</i>	choline kinase beta	4.63	1.10
<i>Lpin1</i>	lipin 1	4.58	3.46
<i>Fasn</i>	fatty acid synthase	3.92	1.02
<i>Lpin3</i>	lipin 3	3.73	8.34
<i>Cyb5r1</i>	cytochrome b5 reductase 1	2.78	0.98
<i>Crot</i>	carnitine O-octanoyltransferase	2.03	-1.31
<i>Acsl3</i>	acyl-CoA synthetase long-chain family member 3	2.02	1.65
<i>Cyb5</i>	cytochrome b-5	1.79	3.45
<i>Agpat6</i>	1-acylglycerol-3-phosphate O-acyltransferase 6 (lysophosphatidic acid acyltransferase, zeta)	1.63	2.11
<i>Ppap2b</i>	phosphatidic acid phosphatase type 2B	1.50	-2.40
<i>Elovl4</i>	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 4	1.45	-2.40
<i>Pecr</i>	peroxisomal trans-2-enoyl-CoA reductase	-1.72	4.47
<i>Acat1</i>	acetyl-CoA acetyltransferase 1	-2.04	-1.08
<i>Hadh2</i>	hydroxyacyl-Coenzyme A dehydrogenase type II	-2.07	-1.33
<i>Elovl5</i>	ELOVL family member 5, elongation of long chain fatty acids (yeast)	-2.28	-1.44
<i>Acsl4</i>	acyl-CoA synthetase long-chain family member 4	-2.34	-1.05
<i>Hadhsc</i>	L-3-hydroxyacyl-Coenzyme A dehydrogenase, short chain	-2.62	1.00
<i>Fads1</i>	fatty acid desaturase 1	-2.64	1.07
<i>Sgms1</i>	Sphingomyelin synthase 1	-2.85	1.15
<i>Ppap2c</i>	phosphatidic acid phosphatase type 2c	-2.95	-2.06
<i>Acsl5</i>	acyl-CoA synthetase long-chain family member 5	-3.14	-1.14
<i>Slc44a1</i>	Choline transporter-like protein 1	-3.19	-2.22
<i>Elovl6</i>	ELOVL family member 6, elongation of long chain fatty acids (yeast)	-3.47	1.60
<i>Nsmaf</i>	Neutral sphingomyeliase activation associated factor	-3.48	-1.25

Affymetrix microarray analysis revealed that a subset of genes encoding proteins that function in lipid metabolism were upregulated in ATF6 α (1-373)-transduced NIH-3T3 fibroblasts (≥ 2 -fold as compared with empty vector controls; $P < 0.05$).