

Table S2. Dependence of BAT gene expression on *Them1* expression and ambient temperature

Genes		22 °C		4 °C			
		-		24 h		96 h	
		<i>Them1</i> ^{+/+}	<i>Them1</i> ^{-/-}	<i>Them1</i> ^{+/+}	<i>Them1</i> ^{-/-}	<i>Them1</i> ^{+/+}	<i>Them1</i> ^{-/-}
Differentiation	<i>Ap2</i>	1.00 ± 0.06	1.38 ± 0.16	2.75 ± 0.30 [†]	2.49 ± 0.42 [†]	1.32 ± 0.24	0.77 ± 0.11 [†]
	<i>Prdm16</i>	1.00 ± 0.25	1.96 ± 0.56	1.10 ± 0.21	1.71 ± 0.32	0.79 ± 0.13	1.01 ± 0.31
	<i>C/ebpβ</i>	1.00 ± 0.26	1.55 ± 0.48	1.21 ± 0.39	1.07 ± 0.17	1.71 ± 0.11 [†]	1.98 ± 0.57
	<i>Cidea</i>	1.00 ± 0.23	1.00 ± 0.12	1.00 ± 0.10	1.06 ± 0.17	1.08 ± 0.15	0.80 ± 0.11
	<i>mtTfa</i>	1.00 ± 0.11	0.97 ± 0.12	1.18 ± 0.17	1.30 ± 0.13	1.13 ± 0.11	0.92 ± 0.05
Thermogenesis	<i>Ucp1</i>	1.00 ± 0.10	0.93 ± 0.14	4.17 ± 0.30 [†]	3.21 ± 0.18 [†]	2.71 ± 0.14 [†]	2.21 ± 0.13 [†]
	<i>Pgc1α</i>	1.00 ± 0.21	0.97 ± 0.24	3.03 ± 0.45 [†]	1.58 ± 0.45	1.68 ± 0.17 [†]	2.65 ± 0.44 [†]
	<i>Pparγ</i>	1.00 ± 0.20	1.11 ± 0.09	0.84 ± 0.17	0.79 ± 0.23	1.08 ± 0.05	1.26 ± 0.26
Fatty acid oxidation	<i>Pparα</i>	1.00 ± 0.17	0.90 ± 0.11	1.26 ± 0.20	0.70 ± 0.04	0.91 ± 0.14	0.71 ± 0.11
	<i>m-Cpt1</i>	1.00 ± 0.17	0.77 ± 0.11	1.81 ± 0.21 [†]	1.32 ± 0.19 [†]	1.46 ± 0.07 [†]	1.15 ± 0.16
	<i>Mcad</i>	1.00 ± 0.07	0.92 ± 0.10	1.28 ± 0.12	1.25 ± 0.17	1.46 ± 0.13 [†]	1.18 ± 0.18
	<i>Acox</i>	1.00 ± 0.09	1.08 ± 0.08	1.61 ± 0.12 [†]	1.25 ± 0.13	1.53 ± 0.10 [†]	1.22 ± 0.21
	<i>Acs1</i>	1.00 ± 0.11	1.30 ± 0.16	2.36 ± 0.21 [†]	1.86 ± 0.10 [†]	1.55 ± 0.22 [†]	1.66 ± 0.32
	<i>Fabp3</i>	1.00 ± 0.09	1.13 ± 0.11	4.68 ± 0.58 [†]	4.07 ± 0.27 [†]	2.96 ± 0.17 [†]	3.35 ± 0.37 [†]
	<i>Lpl</i>	1.00 ± 0.08	1.44 ± 0.15	2.36 ± 0.34 [†]	1.99 ± 0.10	1.90 ± 0.08*	1.37 ± 0.17
Lipogenesis	<i>Vldl-r</i>	1.00 ± 0.06	1.06 ± 0.11	1.51 ± 0.13 [†]	1.51 ± 0.11 [†]	1.31 ± 0.05	1.51 ± 0.20
	<i>Gpat1</i>	1.00 ± 0.14	0.68 ± 0.11	2.87 ± 0.37 [†]	1.78 ± 0.43 [†]	1.72 ± 0.11 [†]	1.43 ± 0.34
	<i>Gpat4</i>	1.00 ± 0.12	1.06 ± 0.12	1.67 ± 0.19 [†]	1.33 ± 0.08	1.29 ± 0.06	1.05 ± 0.19
	<i>Acot1</i>	1.00 ± 0.11	1.49 ± 0.27	3.34 ± 0.92 [†]	2.87 ± 0.46 [†]	1.33 ± 0.16	1.58 ± 0.39
Acots	<i>Acot2</i>	1.00 ± 0.41	0.73 ± 0.15	1.33 ± 0.31	0.87 ± 0.18	0.69 ± 0.11	1.07 ± 0.28
	<i>Acot3</i>	1.00 ± 0.27	0.89 ± 0.22	2.18 ± 0.55	1.02 ± 0.28	1.19 ± 0.38	1.30 ± 0.62
	<i>Acot4</i>	1.00 ± 0.30	1.23 ± 0.13	3.15 ± 0.77 [†]	2.00 ± 0.50	0.89 ± 0.10	1.36 ± 0.50
	<i>Acot5</i>	1.00 ± 0.24	1.08 ± 0.22	19.69 ± 8.10 [†]	3.20 ± 1.33	5.57 ± 1.61 [†]	2.39 ± 0.45 [†]
	<i>Acot6</i>	1.00 ± 0.09	1.50 ± 0.24	1.69 ± 0.26 [†]	1.22 ± 0.12	1.05 ± 0.08	0.99 ± 0.17
	<i>Acot7</i>	1.00 ± 0.15	0.73 ± 0.08	1.18 ± 0.23	1.05 ± 0.08	1.15 ± 0.28	1.23 ± 0.22
	<i>Acot8</i>	1.00 ± 0.18	0.71 ± 0.07	2.72 ± 0.30 [†]	1.60 ± 0.23 ^{†*}	2.23 ± 0.36 [†]	2.28 ± 0.71
	<i>Acot9/10</i>	1.00 ± 0.10	0.97 ± 0.12	1.47 ± 0.10	1.37 ± 0.17	1.37 ± 0.11	1.18 ± 0.05
	<i>Acot12</i>	1.00 ± 0.26	1.26 ± 0.27	6.63 ± 3.02 [†]	4.34 ± 1.13 [†]	4.82 ± 0.66 [†]	5.49 ± 1.08 [†]
	<i>Acot13 (Them2)</i>	1.00 ± 0.14	1.00 ± 0.15	1.16 ± 0.10	1.05 ± 0.10	1.35 ± 0.19	1.35 ± 0.33

BAT isolated from mice (n = 4 - 6 group) housed at 22°C or exposed to 4°C for 24 h or 96 h was analyzed for mRNA expression. mRNA expression levels were normalized to values in BAT of *Them1*^{+/+} mice at 22°C. *P < 0.05 *Them1*^{-/-} vs *Them1*^{+/+}; †P < 0.05, 4°C vs 22°C.