

Supplemental Table2. Changes in circulating amino acid levels by cold exposure

	All		High BAT		Low BAT		P-value		
	27C	19C	27C	19C	27C	19C	Cold	BAT	Interaction
Val (μM)	221.9±4.54	219.5±3.77	233.8±6.19	224.6±5.68	209.3±5.17	214.1±4.72	0.19	0.10	0.003
Leu (μM)	129.0±2.18	132.8±2.07	132.8±2.93	133.5±2.42	125.1±3.01	132.0±3.47	0.006	0.26	0.02
Ile (μM)	65.8±1.86	66.0±1.49	70.3±2.59	68.6±1.92	61.1±2.18	63.2±2.16	0.95	0.06	0.12
BCAAs (μM)	416.8±7.55	418.3±6.29	436.9±10.14	426.6±8.60	395.5±8.71	409.4±8.95	0.57	0.026	0.001
Arg (μM)	86.2±2.31	90.6±3.75	86.1±3.29	93.0±6.35	86.3±3.36	88.0±3.92	0.11	0.69	0.32
Ala (μM)	353.8±10.43	348.0±11.36	367.7±16.70	359.5±18.19	339.0±11.58	335.8±13.15	0.15	0.23	0.52
Pro (μM)	173.6±8.14	169.3±7.87	176.7±9.57	170.5±9.59	170.3±13.66	168.1±12.97	0.014	0.79	0.23
Gly (μM)	240.6±5.43	241.1±4.46	230.4±6.36	232.9±5.66	251.4±8.29	249.8±6.42	0.83	0.05	0.31
Met (μM)	26.4±0.51	27.6±0.70	27.3±0.81	28.5±1.08	25.3±0.52	26.6±0.83	0.005	0.09	0.95
Phe (μM)	57.3±0.97	57.1±0.96	56.5±1.00	56.3±1.38	58.1±1.71	57.8±1.34	0.73	0.41	0.93
Asn (μM)	50.7±1.11	51.2±1.10	50.6±1.60	51.3±1.58	50.9±1.58	51.2±1.59	0.31	0.95	0.65
Asp (μM)	11.8±0.96	10.3±1.00	10.1±1.70	9.5±1.84	13.5±0.73	11.0±0.95	0.001	0.36	0.49
Thr (μM)	129.3±2.49	127.0±2.34	129.0±3.05	125.2±3.24	129.7±4.10	128.9±3.43	0.13	0.64	0.34
Ser (μM)	133.8±2.59	132.6±3.03	130.5±3.51	131.0±4.48	137.2±3.75	134.3±4.15	0.37	0.37	0.23
Glu (μM)	50.1±2.66	39.5±2.00	45.9±3.88	39.8±3.48	54.5±3.39	39.3±1.96	0.000	0.35	0.02
Gln (μM)	592.4±8.71	630.2±8.44	583.4±12.59	619.4±12.72	601.9±11.93	641.7±1065	0.000	0.21	0.77
Cys (μM)	9.2±0.55	7.9±0.56	9.3±0.70	7.6±0.52	9.0±0.89	8.2±1.04	0.09	0.87	0.50
Tyr (μM)	53.5±1.00	51.1±0.95	55.4±1.62	53.5±1.45	51.5±0.94	48.5±0.88	0.000	0.02	0.32
His (μM)	79.6±1.11	80.8±1.45	78.2±1.32	79.2±1.90	81.1±1.78	82.4±2.18	0.20	0.22	0.87
Trp (μM)	60.6±1.42	58.9±1.59	61.5±2.19	58.7±2.48	59.7±1.81	59.2±2.04	0.21	0.83	0.38
Lys (μM)	171.9±3.30	181.5±3.15	173.6±4.75	184.0±4.26	170.0±4.69	178.8±4.70	0.000	0.49	0.57

*n* = 29 (Asp), *n* = 33 (other amino acids)

Values are means ± SEMs. Statistical analysis was performed by using two-way repeated measures ANOVA.

The significant interaction of cold x BAT was found for Val, Leu, total BCAAs, and Glu, implying that these amino acid levels respond to cold exposure in a BAT-dependent manner.

BAT, brown adipose tissue.