

Fig. 2a

Time	HFD-Con										HFD-CC							
0 h	37.4	37.6	37.5	37.5	37.4	37.4	37.5	37.6	37.9	37.8	38	37.9	38	37.9	38.1	38		
1 h	35.7	37	36.6	36.5	35.7	35.5	36.8	36.6	36.7	36.3	36.6	36.6	36.8	36.9	36.9	36.6		
2 h	35.1	36.6	35.2	35.1	35.3	35	35.5	35.4	35.3	35.5	35.8	36	36.2	35.6	36.5	36.3		
3 h	34.3	36.4	34.4	34.5	34.3	34	34.8	34.6	34.3	36.1	34.9	36.1	35.9	34.8	36.1	35.9		
4 h	34	34.5	34	33.8	34.1	34	34.5	34.2	34.6	35.8	34.3	35.8	35.3	34.6	35.9	35.3		
5 h	32.1	33.9	33.6	33.5	32	32.2	33.7	33.9	34.3	34.9	34	34.9	35	34.3	35.2	34.8		
6 h	32.2	33.3	33.7	33.8	32.2	31.8	33.8	33.3	34.2	34.6	34.5	34.9	34.8	34.5	34.9	35		

Fig. 2b

RT	HFD-Con										HFD-CC							
Cold	29.8	29.5	30.6	30.2	29.3	31	30.8	30.2	32.6	31.4	32.5	33	31.8	32.5	32.9	33.3	32.6	

Fig. 2c

Ucp1	0.83333333	0.83666666	1.1125	0.99416666	1.055	1.16833333	2.49749999	1.39583333	1.64749999	1.26833333	1.94083333	1.98583333								
Ppargc1a	1.24526302	0.89536879	0.85567263	1.02180638	0.94976722	1.03209998	1.47022789	1.35260966	1.35849057	1.45699584	1.46140652	1.34525852								
Pdm16	0.75316884	0.86532663	1.01231155	0.6919598	1.29120602	1.38542713	1.68693466	0.85854271	0.74170854	0.98969849	0.68291457	0.84195979								
Dio2	0.83503558	1.03661422	1.1827927	0.95726019	0.53543088	1.4525964	0.94974244	2.01976889	1.51273841	1.48934985	2.12167617	2.32632604								
Elov3	1.08827118	1.07379595	0.9359984	1.05023626	0.95050691	0.90119129	1.1258735	1.35335093	1.66418573	1.717794	1.63839652	1.79110189								
Cidea	0.83001909	1.0353755	1.09171579	1.0707458	1.16276777	0.80937604	1.55472123	1.24714588	1.1591093	1.41482792	1.27856194	1.4793258								
Cold-HFD-Con						Cold-HFD-CC														
Ucp1	2.02999999	2.71333332	2.93749999	3.53666665	2.15999999	3.24249999	3.53999999	3.96333332	4.00166665	6.69999997	3.55583332	5.77416664								
Ppargc1a	1.5496202	1.61578045	2.19946092	1.80543985	1.49963245	2.22298457	3.76966431	3.22009178	2.7199216	2.81842687	3.26243569	3.53001716								
Pdm16	1.26105527	1.30854271	0.21331658	1.10201004	0.25025125	0.88567839	1.3643216	1.17135678	1.33115577	1.780402	1.24221105	0.43040201								
Dio2	4.61589864	4.49979116	3.53584852	5.00431573	4.9099262	5.33593205	6.67409158	7.7934016	5.96157592	5.14798829	8.06400407	6.6907977								
Elov3	6.29659249	5.71841515	5.533831	5.3632562	5.75658318	2.17807307	10.5297158	14.1920491	8.84979035	14.390443	7.51264502	6.9551656								
Cidea	1.65455828	1.63380625	1.58856588	1.73932559	2.33834793	2.47193623	2.55782443	2.87204728	2.58548862	3.61829541	5.05479367	4.80769988								
RT-HFD-Con						RT-HFD-CC														
Ucp1/Tubulin	0.96585073	1.0798125	0.95433677	1.87494345	1.82762436	2.86828801	3.30275274	4.81612575	7.83113506	8.10996733	9.09137343	10.3580263								
Cold-HFD-Con						Cold-HFD-CC														
Ucp1	0.83102493	1.18836565	0.47783933	1.42770083	1.16426593	0.91080332	2.31772853	2.7199446	4.53988919	3.18199446	2.14072022	5.03767313								
Ppargc1a	0.78268331	0.83245218	1.23458909	0.99653998	1.10476929	1.04896615	1.36839483	1.73089379	1.37741855	2.43695851	2.04118803	2.637418								
Pdm16	2.1433854	1.17307994	0.70581116	0.73008225	0.68012819	0.56751305	0.45052778	0.35223325	1.33188409	1.4383138	1.72210394	2.90042805								
Dio2	0.44972973	0.49693694	0.9563964	1.17117117	1.34378378	1.58198198	1.78126126	2.00036036	2.25837838	2.61765766	3.22774774	3.81657657								
Elov3	1.13614026	0.58148492	0.99986718	0.89148625	1.83158454	0.55943684	2.358879	4.09663023	4.95072386	5.50564484	3.07158985	2.23004383								
Cidea	1.13540961	1.14353419	1.05010156	0.95463778	1.16993906	0.54637779	1.34055518	1.60663507	1.99052133	1.28774543	1.67163168	1.6310088								
Cold-HFD-Con						Cold-HFD-CC														
Ucp1	15.0141274	10.9578947	13.0587258	16.967867	10.7800554	6.88670359	17.6426593	24.5950138	35.8221606	25.0396122	20.2861496	20.1182825								
Ppargc1a	3.75466478	3.06479918	2.80731863	3.3566031	5.40603981	4.68181693	7.33495724	8.43485482	10.5207739	10.8124118	8.87629751	10.2202231								
Pdm16	1.61345555	0.81183748	0.26731808	1.41794222	1.24495193	1.07111854	1.45176038	1.00197217	0.41388584	0.97312924	1.0506488	0.3927747								
Dio2	7.00864864	8.21657657	8.86558558	7.54558558	9.57333332	8.7463063	90.7664864	41.2245045	29.7174774	33.6944144	60.9218017	46.7257657								
Elov3	11.9067605	6.2991101	8.4778855	8.35569132	12.8171072	5.69345198	13.2320361	16.4414929	59.1539381	42.4877141	17.7011555	57.9107451								
Cidea	2.03114421	2.04942451	1.8056872	2.28503724	2.40487474	2.04129993	3.06093432	4.57413676	4.00338524	3.39607312	2.91672309	2.80297901								
RT-HFD-Con						RT-HFD-CC														
Ucp1/Tubulin	0.81743745	0.95814848	1.22441406	2.53861268	4.74472345	4.6050756	13.7873659	9.98517846	7.8747591	20.9155152	16.6959521	16.3713411								
Cold-HFD-Con						Cold-HFD-CC														
Time																				
0	20.75	20.92	21.09	22.11	22.74	19.83	22.78	22.25	22.39	22.57	23.33	20.62	21.21	18.4	19.05					
1	21.17	22.16	22.19	22.79	22.84	22.01	23.74	22.61	23.18	23.25	23.58	21.95	22.33	21.18	21.23					
2	22.2	22.79	23.35	23.54	23.63	22.68	24.57	23.3	23.52	24.07	24.91	22.85	23.08	21.33	22.59					
3	23.12	23.81	24.25	24.63	24.87	22.55	24.9	24.56	25.16	25.29	26.34	23.57	24.45	22.02	23.48					
4	24.44	24.55	25.67	25.85	26.41	23.79	25.18	24.76	25.79	26.23	27.19	23.46	24.56	23.71	24.62					
5	24.63	25.3	26.53	27.09	27.12	24.2	26.63	25.91	26.6	28.34	28.75	24.05	25.36	25.15	25.63					
6	25.31	25.78	26.36	28.05	28.36	25.19	27.12	26.42	27.43	29.03	30.19	25.39	26.42	25.27	26.16					
7	26.49	26.73	26.98	28.92	29.63	26.43	29.3	27.63	28.45	30.34	32.1	25.84	26.79	26.43	26.82					
8	27.45	27.61	27.82	30.22	30.76	26.9	29.72	28.38	28.6	31.87	33.04	26.99	27.86	26.69	28.89					
9	28.1	28.19	28.88	31.09	31.25	28.02	31.97	29.8	30.12	33.44	35.42	28.21	28.89	28.72	28.73					
10	28.75	28.69	29.14	32.51	31.84	29.8	33.44	30.68	30.69	35.23	37.56	28.98	29.46	29.79	29.71					
11	28.86	30.77	30.5	35.46	34.53	31	36	33.52	32.46	37.09	40.06	30.58	31.8	30.09	31.52					
12	30.21	33.12	32.24	35.23	37.45	32.76	40.04	34.88	34.97	38.99	39.5	31.97	33.97	31.45	32.48					
13	32.35	35.6	33.56	32.55	40.6	35.35	40.5	37.07	36.98	39.78	40.42	32.28	37.13	33.2	35.12					
14	33.35	36.63	35.12	33.03	41.47	35.75	41.29	37.75	38.42	40.5	40.74	32.66	37.49	33.68	34.62					
15	36.23	37.88	34.78	36.7	36.31	36.7	42.93	40.28	40.16	39.65	39.33	35.17	36.23	34.95	34.5					
16	39.23	39.84	35.82	34.22	34.77	38.39	44.69	39.97	42.2	39.5	37.57	34.8	35.7	35.2	35.4					
17	41.92	42.6	36.26	37.34	35.12	39.54	46.58	40.52	43.45	42.8	40.22	34.96	36.27	35.45	40.39					
18	44.85	43.96	36.52	38.6	34.37	39.8	46.8	41.28	43.9	42.69	41.01	35.68	36.75	35.83	43.97					
Ucp1-Con						Ucp1-CC														
body temperatur	36.7	35.8	36.1	36.1	36.4	36.2	36.6	36.5	36.4	36.4	36.7	36.5	35.8	35.8	36.3	36.8				
Ucp1-Con						Ucp1-CC														
Fig.2k	30.9	31.8	31.5	30.7	31.3	31.5	31.6	30.9	31.5	31.3	30.9	31.4	31.4	31.4	31.4	31.6				
RT	30.9	31.8	31.5	30.7	31.3	31.5	31.6	30.9	31.5	31.3	30.9	31.4	31.4	31.4	31.4	31.6				

HFD-Con																	HFD-CC																
Fig. 3a	HFD-Con																HFD-CC																
Axis 1	-0.088990796	-0.099674635	-0.025164035	-0.081806592	-0.094996706	-0.055390921	-0.006390494	-0.041590809	0.056525541	0.035325774	0.149023036	-0.007862244	0.045075851	0.057214834	0.079228078	0.079474119																	
Axis 2	0.001190755	0.01483362	-0.000118	0.001328143	0.013556926	-0.051544249	-0.03266314	0.021235556	0.062378216	-0.039305916	0.002790423	-0.005298192	0.06565361	0.021867399	-0.113948901	0.038023751																	
Fig. 3c	HFD-Con								HFD-CC																								
Verrucomicrobia	0.000083	0.013462																															
Proteobacteria	0.064264	0.08744																															
Firmicutes	0.404038	0.469746																															
Bacteroidetes	0.499172	0.321186																															
Actinobacteria	0.008178	0.014213																															
Deferribacteres	0.022945	0.092916																															
Other	0.00132	0.001037																															
Fig. 3d	HFD-Con								HFD-CC																								
Lachnospiraceae	0.216901	0.199307																															
Porphyromonadaceae	0.213789	0.126249																															
Ruminococcaceae	0.125423	0.116666																															
Bacteroidaceae	0.082541	0.095399																															
Rikenellaceae	0.115928	0.051391																															
Desulfotribionaceae	0.059484	0.083746																															
Deferribacteraceae	0.022945	0.092916																															
Lactobacillaceae	0.020777	0.070048																															
Erysipelotrichaceae	0.005943	0.02998																															
Prevotellaceae	0.014019	0.017331																															
Streptococcaceae	0.013243	0.010663																															
Coriobacteriaceae	0.008057	0.014036																															
Peptostreptococcaceae	0.000021	0.018684																															
Verrucomicrobiaceae	0.000083	0.013462																															
Peptococcaceae_1	0.003283	0.005111																															
Other	0.097563	0.055011																															
Fig. 3e	Alistipes				Alistipes				Lactobacillus				Clostridium_XIVa				Acetatifactor				Mucispirillum				Odoribacter								
Axis 1	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC	HFD-Con	HFD-CC									
1.02282	1.02282	0.02168	1.751051	2.064572	12.244013	0.406911	0.983924	6.203722	1.797745	1.662664	3.81729	4.53272	0.905543																				
13.326329	11.08832	0.010006	0.011674	2.778334	0.997265	0.365219	2.102928	3.823961	1.34414	1.339137	16.089654	4.599426	1.597625																				
6.35548	2.920085	0.010006	3.627176	4.51104	9.884264	0.612034	0.385231	9.360616	0.768795	6.7774	14.340271	0.00334	0.106731																				
14.915616	2.256354	0.00667	4.686145	1.205723	2.389767	0.40024	0.575345	4.721166	1.212394	0.145087	11.842105	4.057434	0.466965																				
12.779334	3.703889	0.00334	0.363551	2.851711	10.327863	0.265159	0.483624	1.519425	1.635982	0.195117	1.560937	2.017877	0.435261																				
9.068775	9.432326	0.00167	4.844573	1.439197	10.286172	0.395237	1.260756	1.747715	1.871123	0.170102	8.064839	3.025148	0.90054																				
5.98599	4.019078	0.00834	0.156761	1.112334	0.882196	0.466947	0.758789	2.036222	2.006204	7.973117	12.849376	0.978921	1.2224																				
16.206391	5.770129	0.005	1.961177	0.658729	9.027083	0.365219	0.320192	1.028951	1.84444	0.093389	5.768461	0.093389	0.236809																				
Fig. 3g	HFD-Con				HFD-CC				HFD-Con				HFD-CC				HFD-Con				HFD-CC												
Tjp1	0.6499133	1.56954062	0.74999995	0.869584	0.91507793	1.2458838	1.49220094	1.56109175	1.81130837	1.54744357	1.17699299	1.48375206																					
Ocln	0.7466401	0.96615229	1.31035338	1.41264307	0.55699351	1.00721749	1.59780981	1.31333994	1.9084121	1.3723245	1.14534591	2.92682919																					
Muc2	0.8175501	1.09061183	0.93037201	1.27619571	0.71372124	1.17154929	1.51737299	2.50742616	2.70772593	1.40373352	1.51492034	1.81986652																					
Fig. 3h	HFD-Con				HFD-CC				HFD-Con				HFD-CC				HFD-Con				HFD-CC												
LPS	1.26764	1.085898	1.064382	1.148577	0.997026	0.984864	0.982058	0.989542	0.751925	0.764086	0.787474	0.757538	0.782796	0.809926	0.859762	0.735086	0.819281																

Fig. 5a

HFD-Con														HFD-CC													
TCA	12.47421	50.92177	53.43215	53.67484	46.4588	56.4627	44.50022	54.96695	26.81721	17.39655	31.84331	21.25097	35.94952	15.63986	18.43761	21.50537											
T-β-MCA	5.852951	12.05137	18.18587	5.538526	6.78689	13.89463	7.68133	6.849326	3.986525	6.297949	5.32911	3.689658	6.962433	15.86922	9.804128	6.73189											
T-α-MCA	1.022927	4.970094	8.004468	7.265506	7.526409	9.811735	6.63074	6.89794	2.897918	0.811293	1.60955	1.051565	1.970414	2.162923	3.105055	3.210307											
TUDCA	0.848068	1.597891	2.747988	3.239861	3.922253	4.097661	2.867378	2.381238	1.368096	1.859629	3.155459	1.989942	3.174831	6.725099	9.868432	3.934945											
TDCA	0.310708	0.770827	3.069057	4.489588	4.45658	4.445647	3.200548	3.06083	0.647395	0	0	0	1.133036	0	4.73545	5.291167											
CA	0.827576	1.346599	1.661753	0	1.630652	0.328821	0.825004	0	9.801178	2.59855	1.787832	3.131195	0	0	0	0											
β-MCA	45.38355	2.461109	1.277518	0.491094	1.293381	0.761696	3.072706	0.790904	11.00255	22.2178	2.725438	4.22211	5.966341	17.32643	15.08829	3.783129											
α-MCA	0.98353	0.230375	0	0	0.405742	0.26861	1.342667	0.208581	0.657464	1.501573	0	0.570051	0	1.311804	1.491611	0											
TDCA	1.794045	10.30321	5.27536	14.51806	12.14751	3.952644	17.25065	15.38982	6.501371	7.582856	12.50697	11.48423	10.80927	9.618519	12.79459	12.46879											
THDCA	1.030421	2.723038	2.008161	5.354939	4.58842	2.138973	1.799152	1.913561	2.162087	1.09462	2.668136	1.598075	2.249389	2.156573	2.799487	2.820284											
DCA	7.094243	9.138511	3.15095	4.232238	9.130704	2.265337	8.416347	5.776971	24.55699	28.17331	30.22175	41.38455	25.9404	23.34289	15.77919	34.434											
ω-MCA	3.499599	1.553869	0.852326	0.517441	0.521754	1.075571	0.876494	0.770426	3.368234	6.265843	5.238771	4.812091	2.050201	2.801762	2.298364	1.988365											
HDCA	0.795671	0.477294	0.186831	0.297583	0.496686	0.289699	0.294154	0.288397	1.327022	1.055692	1.517915	1.695222	0.888567	1.04063	1.51516	1.161444											
LCA	0.233899	0.322333	0.147651	0.380327	0.451237	0.246749	0.327588	0.391256	0.789329	1.084838	1.395759	1.024747	0.906601	2.004195	1.501388	2.619024											
HFD-Con														HFD-CC													
Cyp7a1	0.84036229	1.04620861	0.62840196	1.05994408	1.02386386	1.40622122	0.124831	0.21321135	0.32131409	0.36575483	0.54588596	0.37311986															
Cyp7b1	0.74087445	0.4314804	1.60826534	1.35293527	0.41160027	1.4538443	4.27727613	2.00840658	2.67959497	2.96847537	3.91566279	5.79917747															
Cyp8b1	1.3831259	1.13692949	1.09958509	0.98063626	0.966805	0.43291841	0.81466116	0.26832642	0.56293224	0.07883818	0.74412173	0.1922545															
Cyp27a1	1.23601814	1.41995568	0.58561866	0.76700497	1.10516087	0.88620169	1.2956165	1.27359102	1.46663788	1.0442669	0.90952278	0.42366666															
Act1d1	0.49658845	0.81599468	0.8593815	2.27195642	0.71837571	0.8381469	1.04949402	0.6020493	1.45450337	1.76043537	0.49428037	0.97319751															
HFD-Con														HFD-CC													
Cyp7a1/Tubulin	0.90016	1.060237	1.097514	0.942089	0.569778	0.567437	0.691507	0.747269																			
Cyp7b1/Tubulin	0.639962	0.974924	1.138896	1.246217	3.032868	2.568132	3.507246	4.020072																			
Cyp8b1/Tubulin	1.01293	0.67943	1.599164	0.748475	0.169937	0.115502	0.282657	0.330613																			
HFD-Con														HFD-CC													
Cyp7a1/Tubulin	0.702615	1.21659	1.091864	0.988931	1.015426	0.808764	1.475092	1.706072																			
Cyp7b1/Tubulin	1.052764	1.16946	0.949829	0.827949	0.988885	0.968824	1.01058	0.790781																			
Cyp8b1/Tubulin	1.595798	1.166947	0.596628	0.460628	1.134115	1.034271	0.854872	0.55854																			
HFD-Con														HFD-CC													
Cyp7a1/Tubulin	1.02177204	0.91177303	1.08065511	0.98579682	0.63674693	0.54647312	0.59071165	0.42151877																			
Cyp7b1/Tubulin	1.24630276	0.74895055	0.90359205	1.10115466	2.02768903	2.30276013	2.77184057	3.73921403																			
Cyp8b1/Tubulin	1.13915385	0.88688882	0.96437058	1.01078675	0.5880138	0.60282889	0.58894949	0.50103648																			
HFD-Con														HFD-CC													
HFD-Con														HFD-CC													
TCA	31.91872	25.71858	26.83209	34.66087	34.68151	33.46517	28.3031	23.13881	21.88379	26.43222	22.49373	17.58417	10.87721	19.4918	17.77146	15.15364											
T-β-MCA	3.2098	1.455437	2.864332	4.278515	1.918557	2.981265	2.501576	2.506506	4.657733	3.199247	2.661915	2.1636	1.912269	2.671788	2.088653	1.11595											
T-α-MCA	4.78978	2.076051	3.234178	4.343296	3.019208	5.272459	4.784981	3.223794	4.087115	4.11419	2.062863	3.134133	1.303346	2.333092	2.285233	1.506245											
TUDCA	2.415482	2.329216	2.774327	2.432346	2.630819	1.467509	1.531474	1.896943	1.836467	3.15042	2.146696	1.520414	2.592757	5.05796	2.456061	2.561997											
TDCA	3.418553	3.016651	2.027227	4.536874	3.000263	3.751933	2.829245	3.023476	3.86775	5.287751	2.79643	3.057021	2.874552	4.763513	3.042933	3.287624											
CA	0	1.444098	1.662876	0.554849	0	2.423177	0	0	10.4509	0	0	0	0	0	0	0											
β-MCA	1.093003	1.331291	1.652373	0.682553	0.66417	1.408704	0.498468	0.9944	3.508241	0.901492	1.082602	1.813618	3.080577	1.410837	1.252578	1.53973											
α-MCA	0.680036	0.393978	0.681308	0.339862	0.247208	1.119176	0.299962	0.366296	2.007773	0.836821	0.935464	1.396552	0.877342	0.580314	0.695781	1.872058											
TDCA	26.59348	33.69872	33.17906	31.61676	34.56097	15.43391	34.15478	42.42381	8.444553	20.17321	22.33476	21.93405	29.8145	34.08303	24.01967	31.50393											
THDCA	8.319208	8.643896	5.672196	6.598333	5.600713	7.384777	10.17998	8.555332	4.911569	6.116749	6.158543	7.448714	8.913718	6.249255	7.551034	7.126224											
DCA	13.55313	15.83623	15.24731	7.654167	10.993	17.86407	11.08241	11.52536	27.73044	22.6166	29.00096	28.79893	24.43984	18.35657	30.40582	24.10894											
ω-MCA	1.439289	1.28178	2.063177	0.855666	0.8687	2.263461	1.085366	0.376	1.77719	1.946544	2.617813	3.84															
HDCA	1.633016	1.569947	1.184704	0.821798	0.915834	2.971524	1.431763	0.8164	3.042679	2.713773	3.289032	3.790239	4.703881	1.262513	2.716396	3.429755											
LCA	0.393697	0.884295	0.92485	0.505262	0.89043	0.870205	0.937731	0.583203	0.727051	0.937731	1.820737	1.962465	2.319858	1.889579	1.554426												

Fig. 6a																	Gqbar1-CC																
TCA	30.39	47.79	32.72	41.67	36.69	60.62	47.61	32.93	28.19	30.38	30.59	27.17	26.82	37.25	20.58	15.14																	
Tα-MCA	3.65	3.68	3.71	3.62	2.67	5.32	1.81	3.05	7.8	6.1	9.51	4.34	1.44	3.27	1.6	2.07																	
Tβ-MCA	7.12	7.78	5.6	10.57	5.02	8.42	4.77	5.64	7.3	5.42	6.85	5.74	2.14	6.48	2.89	2.65																	
TUDCA	3.69	1.27	5.36	1.48	6.92	1.47	2.63	8.82	6.11	4.94	6.01	3.83	6.7	4.76	8.31	4.66																	
TGDCA	10.65	6.86	9.8	18.73	27.56	7.88	5.78	13.77	21.16	6.84	8.88	12.14	6.67	9.08	8.35	6.29																	
CA	0	1.29	0.3	0.16	0	0.04	1.46	0	1.04	3.31	1.87	4.49	0.36	1.73	0.65	0.51																	
β-MCA	0.66	0.41	0.73	0.28	0.39	0.13	0.49	0.4	2.37	2.67	2.45	4.23	1.14	1.37	1.19	1.31																	
α-MCA	0.45	0.19	0.45	0.15	0.23	0.05	0.28	0.14	1.55	0.94	0.65	1.14	0.34	0.65	0.51	1.2																	
TDCA	29.1	21.96	28.45	16.29	16.1	13.99	27.34	30.71	10.79	24.06	20.31	14.78	37.26	12.74	38.75	29.94																	
THDCA	4.61	1.44	2.77	0.39	0.77	0.3	0.72	1.32	0.67	0.39	0.72	0.4	0.54	0.87	0.89	1.66																	
DCA	5.76	6.45	4.93	4.94	1.94	1.35	5.25	1.86	9.23	10.35	7.58	14.16	12.5	15.3	11.91	22.27																	
ω-MCA	1.18	0.45	2.8	0.47	0.66	0.09	0.5	0.54	1.43	2.01	1.72	1.21	1.66	1.38	1.34	2.27																	
HDCA	1.01	0.49	1.06	0.17	0.21	0.06	0.27	0.18	0	0.39	0.27	0.27	0.64	1.63	0.75	1.89																	
LCA	0.94	0.19	0.53	0.37	0.33	0.05	0.26	0.28	1.12	0.71	0.7	1.72	0.88	0.99	0.81	3.44																	
Fig. 6b																	Gqbar1-CC																
Time																																	
0	23.26	24.91	25	24	25.25	23.36	23.4	23	24.2	24.62	23.87	24	25	25	23.26	24.21	25.33	21.68	23.6	24.3													
1	26.45	26.45	27.7	26.35	27.65	24.97	25.25	24.6	26.14	26.24	24.83	24.83	21.89	27.82	24.72	26.61	27.1	25.12	25.4	28.99													
2	27.15	29	30.68	28.93	31.32	26.19	28.3	26.98	27.32	28.13	26.4	27.3	37	29.42	26.98	28.08	28.68	28	28.63	33.13													
3	29.98	32.58	33.58	30.7	34	27.74	31.11	28.49	28.61	29.26	28.87	29.13	42.12	33.57	29	30.48	29.12	30.15	34.72														
4	32.12	35.05	36.96	32.5	35.38	28.35	32.94	30.31	30.45	31.6	30.95	30.95	46.09	35.58	29.47	30.16	33.22	31.5	32.75	36.56													
5	34.74	38.42	39.55	35.5	40	30.67	36.04	32.34	33.11	34.34	32.3	33.21	47.6	37	30.67	31.77	36.28	35.38	35.44	41.5													
6	37.8	41.37	43.37	39.15	44.01	32.59	37.98	34.03	35.53	36.51	35.23	36	48.15	39.81	33.12	33.72	36.84	37.33	37.8	42.92													
7	39.86	43.97	45.95	41.18	46.71	34.17	40.09	35.77	38.52	38.62	38.02	37.37	51.85	42.47	35.42	35.76	42.01	39.17	39.88	45.71													
8	41.72	46.17	48.07	43.23	47.31	35.72	41.27	36.55	41.05	41.06	37.39	37.96	57.97	44.44	36.94	37.49	44.54	40.86	41.52	47.89													
9	43.25	48.4	50.43	44.95	48.23	38.49	42.74	37.56	43.53	44.32	38.71	40.16	57.38	46.52	38.98	39.11	47.46	42.68	43.36	49.63													
10	45.24	49.23	50.76	46.93	50.04	40.35	44.15	38.75	45.15	46.01	39.89	41.28	66.06	47.49	41.08	41.82	48.72	42.46	45.34	50.83													
11	46.74	49.6	50.51	47.12	48.92	41.83	44.73	40.37	46.82	48.36	41.49	42.1	60.06	48.02	42.42	44.16	49.63	43.62	45.95	50.55													
12	48.48	50.97	51.21	48.84	48.57	43.35	45.63	41.51	48.32	50.41	42.41	43.04	55.9	49.19	41.98	46.58	51.63	45.55	46.75	51.4													
Fig. 6c																	Gqbar1-CC																
iodv temperature	37.1	38	37	38	36.3	37.6	37.2	37.2	37.5	37.6	37.4	37.4	37	37.1	36.3	36.8																	
Fig. 6d																	Gqbar1-CC																
Time																																	
0 h	37.1	38	37	38	36.3	37.6	37.2	37.2	37.5	37.6	37.4	37.4	37	37.1	37.1	37																	
1 h	34.3	35.7	35.7	35.3	34.6	34.8	34.4	35.8	34.9	35.1	34.8	34.7	34.3	34.6	34.1	34.8																	
2 h	34.4	35	35	34.5	34.2	35.3	33.8	35.5	34.9	35.1	35.3	34.6	34.4	34.4	33.5	34.1																	
3 h	34.4	35.4	36	34.8	34.4	33.7	34.7	34.2	34.8	35.4	34.4	34.4	34	34.4	34.4	34.1																	
4 h	34.4	34.2	34	36.6	34.5	33.9	35.1	35.8	34.8	35.8	34.7	34.6	35.4	34.5	34.2	33.4																	
5 h	33.8	33.8	34.2	35.9	33.4	33.8	35.3	35.3	34.4	34.3	34.1	34.1	34.1	34.1	34.4	33.8																	
6 h	34.4	34.8	33.6	34.4	33.8	33	34.3	34.6	33.6	34.8	34	34.4	34.1	33.6	34.4	33.6																	
Fig. 6e																	Gqbar1-CC																
RT	35.8	33.5	33.6	33.1	34.4	33	33.1	33.5	34.8	33.9	33.7	33	34.6	34.5	33.5	33.3																	
Cold	28.8	29	28.7	29.2	28.6	29.4	28.7	30.3	27.3	27.8	27.2	32.2	30.3	29.4	29.9	30.4																	
Fig. 6f																	RT-Gqbar1-CC																
Ucp1	0.93632031	0.8336871	0.73728223	0.72321572	1.2799372	1.48655746	0.91734379	0.55048819	0.78666801	0.68041462	1.24078392	1.33651042																					
Pparg1a	0.65203217	0.98522061	0.8430776	0.80330363	1.31058468	1.40578136	1.11823517	0.90893284	1.58117801	1.40708542	1.38556836	2.46568567																					
Pdm16	0.74925075	1.31043956	1.04145854	1.16883117	0.81968032	0.91033966	1.21753247	1.0467033	1.08765235	1.04370629	0.91333666	1.0939061																					
Dcd2	1.17261523	0.96122657	1.04641589	1.29785313	0.63203063	0.88714954	0.60431169	1.29051685	1.13769384	1.50378766	1.02130213	1.3113716																					
Elovl3	1.35043694	0.50213831	0.72670622	0.75733736	1.0733844	1.58996976	0.9220671	0.71855	0.3018837	0.13288165	2.17434459	1.17527241																					
Cidea	0.16567721	0.65442498	0.6954261	1.18094715	1.00284415	2.30556405	0.19549911	0.12641171	0.95893969	1.02438219	1.34284811	1.94255629																					
Fig. 6g																	RT-Gqbar1-CC																
Ucp1	2.53874264	3.19385669	2.53463404	1.80038606	2.95090801	2.45101574	2.13862147	2.18194734	2.98364512	1.99617726	2.03725044	1.56747509																					
Pparg1a	3.24125192	7.3614432	8.48119978	3.88196046	4.61638776	5.88459033	3.89589222	14.684197	13.377092	2.55466204	5.01412739	4.54140406																					
Pdm16	0.65709291	0.69369619	0.42072953	0.48716823	0.31643157	0.501986	0.51698302	0.42032667	0.85714286	0.75449551	0.20829171	0.26523477																					
Dcd2	2.74281289	2.56750906	2.71274365	1.88766631	1.8544677	2.03288019	2.74325167	1.88125094	1.53754759	2.18849847	2.76386122	1.05188738																					
Elovl3	7.05888445	18.3173935	9.3335117	8.01098716	8.3686307	17.2134297	4.5617866	11.1330327	10.4172791	7.41371884	5.25682955	14.53907																					
Cidea	3.87237343	3.44625165	6.06235007	10.7082151	3.5176242	4.04765992	3.83062277	5.89131591	6.67646021	6.8491018	4.29021135	4.44793606																					
Fig. 6h																	Cold-Gqbar1-CC																
Ucp1	8.27720931	10.7482131	18.7619261	10.3394454	9.1670198	18.866715	6.8530438	12.6588489	19.0524406	8.5672433	8.7769476	14.536391																					
Pparg1a	1.60587462	2.3769232	3.9922739	2.8509619	1.57299431	1.7683306	1.6584813	1.32526467	1.645331	1.86810259	3.41166156	1.5820079																					
Pdm16	0.54576651	0.26039168	0.118876	0.13325551	0.13325551	0.2790043	0.1902843	0.2080848	0.2601164	0.26078566	0.4403921	0.5020739																					
Dcd2	3.103096	3.3496228	2.1879643	4.0834042	4.4868438	8.2366436	2.7670125	2.6966422	3.345605	2.4108657	5.007092	9.0966258																					
Elovl3	4.4937518	5.3366658	6.2487172	8.5147563	7.0705503	17.1209913	3.8910408	3.40061182	7.4745087	10.39217	6.5833897	1.6199756																					
Cidea	1.1784715	1.8371908	2.9385028	3.9297805	2.2818217	1.7448417	1.6632404	2.0182484	2.03564156	2.8067009	3.3372607	5.180779																					
Fig. 6i																	RT-Gqbar1-CC																
Ucp1/Tubulin	1.540091	0.921803	0.57101	0.49745	0.340854	0.767426	2.344176	2.9491	3.072506	2.06737	2.919552	1.5686898																					

HFD-Con										HFD-CC									
Fig. 7a																			
BAT	231.84	280.25	214.59	272.53	174.21	187.2	291.2943	362.0886	330.7174	367.6838	360.0132	333.1188							
iWAT	14.66	23.84	24.91	33	31.03	29.96	32.82014	49.47994	43.55799	36.60578	38.40841	44.78078							
Fig. 7b																			
BAT	288.1772	197.9632	441.8047	396.3357	366.3467	268.0974	529.1075	475.4296	678.8718	465.5479	463.8601	498.276							
iWAT	28.84441	48.5284	49.17775	41.20112	37.04585	43.77522	67.01586	52.84303	56.20473	97.03588	56.19606	74.45522							
Fig. 7c																			
BAT-pCreb/Creb	1.416695	0.715187	0.83169	1.036427	2.983998	4.218773	3.294331	4.99953											
iWAT-pCreb/Creb	0.694715	0.651427	1.384618	1.269239	6.627914	9.137515	4.010954	3.477727											
Fig. 7d																			
BAT-pCreb/Creb	1.425015	1.009526	0.640618	0.924841	12.60882	18.20298	11.55112	8.183176											
iWAT-pCreb/Creb	0.566117	1.257683	0.766264	1.409936	2.050591	1.499598	1.510347	2.786003											
Fig. 7e																			
Cd137	0.2929014	0.79594282	1.42483441	1.38752882	1.13055462	0.96823748	0.7265454	2.9664342	3.14559669	2.80142626	5.49595634	3.14288792							
Tmem26	0.52549873	0.63117971	0.79160898	1.1570725	1.55334538	1.34129383	0.80045153	2.462852	2.56262213	2.09019786	1.602233	1.15948699							
Fig. 7f																			
Cd137	1.15711095	1.10349963	0.70141474	1.35815339	1.15711095	0.52271035	4.46760983	3.83767684	6.11169025	2.48845868	6.07148176	3.73492182							
Tmem26	1.05998357	1.07477403	0.9441249	1.52588332	0.5398521	0.85538299	2.46507806	2.11503699	2.20870994	4.84387839	4.14872637	5.7189811							
Fig. 7h																			
BAT																			
Nrf1	1.47311564	0.1079376	0.13456577	0.63638596	1.01303536	0.92363451	1.48284011	1.94156641	1.04716941	1.23594402	1.17260005	1.59391112							
Tfam	1.35226504	0.57471264	1.14401622	0.89790399	1.11832139	0.9127789	1.8837052	6.83683569	2.04868154	3.36308315	1.94455713	4.02296334							
Tfb2m	1.62381597	0.47902571	1.62868472	0.58782138	0.97753127	0.70311232	1.50690122	2.98294994	2.2733426	2.94234544	1.70175914	4.61975643							
iWAT																			
Nrf1	0.9059339	0.97025521	0.51094672	0.1896425	1.4431527	1.35074444	1.264868372	1.17499627	1.08772316	1.22844637	1.488494	1.93779261							
Tfam	1.0051935	0.85642486	0.73479645	0.7659575	1.38917742	1.24845033	1.31278271	1.3137879	2.08979729	1.46456693	1.18210756	2.0787046							
Tfb2m	0.9928917	0.86635795	0.4207565	0.154816	1.3407119	1.52027561	1.39438642	1.6503474	3.05160448	1.3668237	1.7826984	2.5226597							
BAT-mtDNA	0.82349127	1.07981463	0.77801764	0.89815586	1.03859954	1.38192106	1.47354616	2.23252558	1.53217856	2.20763739	1.49330641	1.60463283							
iWAT-mtDNA	0.756765	0.89244856	0.89196462	1.11523051	1.17843457	1.16515658	1.41140043	1.39070422	1.22996359	1.35963836	2.15865702	1.84459264							
Fig. 7i																			
BAT																			
Nrf1	0.81175648	1.05020921	1.34306923	0.9790795	0.82845188	0.9874477	4.18410042	4.32633599	3.96108787	3.4847042	5.67364017	3.73640188							
Tfam	0.64888952	0.34236665	0.96859371	1.02965228	0.53265069	1.14759715	2.8541563	4.83994384	3.90683278	7.4105224	3.80049019	4.8488782							
Tfb2m	1.18462338	0.91129253	0.60473551	0.92592208	0.61860655	0.76492404	2.77865268	4.18273431	4.60473551	3.2512614	4.07800419	2.70476112							
iWAT																			
Nrf1	0.86592654	1.0330485	1.02818012	0.7146184	0.92058068	0.98035865	1.7079419	1.85632589	1.8835992	1.85140902	1.64712209	1.43979502							
Tfam	1.10407339	0.8342031	0.80041893	0.91746692	0.95517385	1.28194385	2.5136154	1.63636363	1.83996647	2.16673647	2.05362739	1.82484878							
Tfb2m	0.19385548	0.5003376	1.08543097	1.02700876	1.1294463	1.26401078	2.0256583	2.7933828	1.93652933	1.70560429	4.31390904	2.0250502							
BAT-mtDNA	0.8624055	1.01625136	1.72047671	0.78665555	1.75189599	0.8624055	2.16684724	2.87757331	2.31001084	2.21668473	1.74374229	1.33911159							
iWAT-mtDNA	0.9674559	1.59808358	1.78475645	0.88302638	0.98306838	0.8541563	2.89759589	1.27327028	1.87954206	1.32702837	1.75151024	2.33349925							

Fig. 8a	<i>Gpbar1</i> -Con										<i>Gpbar1</i> -CC		
BAT	592.2725	414.1178	317.3659	302.8417	565.5148	308.5557	570.5156	360.0213	388.1713	407.4585	438.5033	309.8549	
iWAT	67.53506	66.15879	61.78496	58.63239	46.1748	45.08633	58.58763	48.48331	68.77866	54.01099	58.03902	54.59483	
Fig. 8b	<i>Gpbar1</i> -Con					<i>Gpbar1</i> -CC							
BAT-pCreb/Creb	1.689858	0.737507	0.656053	0.916582	0.873065	0.90035	0.847821	0.890319					
iWAT-pCreb/Creb	1.255673	1.076159	1.329494	0.338674	0.863892	0.798936	1.191068	1.170432					
Fig. 8c	<i>Gpbar1</i> -Con										<i>Gpbar1</i> -CC		
Cd137	0.65645514	0.82319475	1.06608315	1.35164113	0.87768052	1.22494529	0.77199124	1.84857767	0.81334792	0.24026258	0.87111597	0.54157549	
Tmem26	0.66956813	0.75929026	1.130231	1.39671912	1.39069301	0.65349849	1.20723134	0.60997657	1.1282223	0.62470707	1.14027453	0.64948109	
Fig. 8d	<i>Gpbar1</i> -Con										<i>Gpbar1</i> -CC		
BAT													
Nrf1	1.48980387	0.81215273	0.69285951	0.72569656	1.17767732	1.10180999	0.84204586	0.96166489	0.82533643	0.61604966	1.11749544	2.03545517	
Tfam	1.04742681	0.97432333	0.88618604	1.0683845	0.88433483	1.13934447	0.80493722	0.73699765	0.64674608	0.58599702	1.29148506	1.46815911	
Tfb2m	0.64017054	1.04074156	1.12204429	1.3125	0.85401171	1.03053189	0.77157457	0.61787786	0.65789437	0.64369865	1.28526379	1.75169293	
iWAT													
Nrf1	1.22217204	0.9126677	1.17699647	0.96331283	0.888643	0.83620796	0.94157008	0.84677626	0.67669221	1.07666892	0.71311078	1.50280253	
Tfam	1.20850304	0.83196017	1.07986236	1.14371556	0.96413557	0.77182335	1.14417751	1.14586441	1.116886	1.04121928	0.51904731	1.44991195	
Tfb2m	1.25152973	0.49129869	1.32881534	1.23719838	1.14045087	0.55070704	1.15337139	1.15439113	1.28638908	1.02808863	0.28969791	1.40306492	
BAT-mtDNA	0.84638374	0.77585176	1.26479378	0.65750149	1.19545726	1.26001195	0.69456067	0.79736999	1.13329348	1.40107591	1.31380753	1.33293484	
iWAT-mtDNA	1.36892539	0.74332649	1.04449007	1.21560575	0.92813141	0.69952087	1.49760438	0.70499658	1.05954825	1.26762491	0.85284052	0.5338809	

