

Table S1. Difference in fatty acid composition of HLB, GOM and MAD

Fatty acid (g·100g ⁻¹)	HLB	GOM	MAD	<i>P</i> ^a	<i>P</i> -Value ^b		
					<i>P</i> ₁	<i>P</i> ₂	<i>P</i> ₃
C10:0 (decanoic)	0.037±0.004	0.065±0.004	0.556±0.006	0.001	0.001	0.008	0.162
C12:0 (lauric)	0.048±0.002	0.082±0.004	0.077±0.001	<0.001	<0.001	<0.001	0.152
C14:0 (myristic)	0.997±0.036	1.469±0.037	1.357±0.022	<0.001	<0.001	<0.001	0.013
C16:0 (palmitic)	22.31±0.801	27.675±0.089	27.766±0.684	<0.001	<0.001	<0.001	0.990
C17:0 (margaric)	0.359±0.034	0.333±0.064	0.292±0.022	0.247	-	-	-
C18:0 (stearic)	13.303±1.472	19.603±0.614	21.316±1.238	<0.001	0.002	<0.001	0.248
C20:0 (arachidic)	0.339±0.036	0.352±0.02	0.337±0.029	0.799	-	-	-
SFA	37.393±2.193	49.578±1.485	51.2±1.956	<0.001	<0.001	<0.001	0.578
C16:1n-7 (palmitoleic)	1.742±0.147	1.46±0.077	1.347±0.169	0.03	0.098	0.028	0.598
C17:1n-10 (ginkgolic)	0.225±0.013	0.147±0.014	0.133±0.006	<0.001	<0.001	<0.001	0.369
C18:1n-9 (oleic)	41.378±1.32	34.874±0.492	35.888±0.493	<0.001	<0.001	<0.001	0.380
C20:1n-9 (eicosenoic)	0.150±0.003	0.126±0.007	0.158±0.004	0.015	0.048	0.608	0.015
C22:1n-9 (erucic)	0.015±0.003	0.013±0.002	0.013±0.001	0.388	-	-	-
MUFA	43.54±1.268	36.619±0.491	37.54±0.661	<0.001	<0.001	<0.001	0.450
C18:2n-6 (linoleic)	16.036±0.77	11.563±0.85	9.325±2.017	0.011	<0.05	<0.05	ns ^c
C18:3n-3 (α-linolenic)	0.760±0.011	0.570±0.031	0.460±0.078	<0.001	0.008	<0.001	0.071
C18:3n-6 (γ-linolenic)	0.019±0.001	0.036±0.002	0.029±0.004	<0.001	<0.001	0.008	0.053
C20:2n-6 (eicosadienoic)	0.081±0.051	0.461±0.044	0.401±0.058	<0.001	<0.001	<0.001	0.389
C20:3n-3 (eicosatrienoic)	1.368±0.137	1.11±0.095	0.999±0.197	0.056	-	-	-
C20:5n-3 (EPA)	0.017±0.001	0.015±0.002	0.013±0.000	0.023	0.248	0.019	0.175
C22:6n-3 (DHA)	0.055±0.005	0.049±0.009	0.043±0.004	0.180	-	-	-
PUFA	19.067±0.954	13.803±1.006	11.26±2.34	0.002	0.015	0.002	0.197
PUFA/SFA	0.510	0.278	0.220	<0.001	0.003	<0.001	0.362
Palmitoleic/Palmitic ^d	0.078	0.053	0.049	0.001	0.004	0.002	0.640
Oleic/Stearic ^d	3.111	1.779	1.684	0.025	<0.05	<0.05	ns ^c
Stearic/Palmitic ^e	0.596	0.708	0.768	0.002	0.014	0.002	0.156

Note: In total of 19 different hydrocarbon chain length (from 10-22 carbons) fatty acid were classified into three main types, i.e. the saturated (SFA), monounsaturated (MUFA) and polyunsaturated fatty acid (PUFA).

Data normally distributed (Kolmogorov-Smirnov test, $P > 0.05$). The statistical significance were calculated by One-Way ANOVA, Tukey multiple range test ($n = 3$). Values are means ± s.d. The significance level is set at 0.05.

^a One-Way ANOVA test *P* value;

^b Multiple Comparison *P*-value, *P*₁: HLB vs GOM; *P*₂: HLB vs MAD; *P*₃: GOM vs MAD;

^c Data not normally distributed, Student-Newman-Keuls rank test was used, ns: not significance;

^d Desaturation index;

^e Elongation index.

Table S2 - Differentially expressed genes between SAT and VAT

Ensembl Transcript ID	Gene symbol	Expression level (FPKM)			P-value		
		HLB	GOM	MAD	$P_{\text{HLB-GOM}}$	$P_{\text{HLB-MAD}}$	$P_{\text{GOM-MAD}}$
ENSSSCT00000000030	<i>SCUBE1</i>	1.66056	16.2145	18.0509	1.01611E-06	9.67542E-07	0.69002
ENSSSCT00000000031	-	0.664532	25.7123	23.546	1.36529E-07	1.82482E-07	0.751263
ENSSSCT00000000111	<i>KDELR3</i>	34.6235	9.78001	8.57146	3.73536E-05	0.000128003	0.697598
ENSSSCT00000000253	<i>LOC100522015</i>	4.54781	20.9664	26.6302	7.08807E-05	2.17599E-05	0.369646
ENSSSCT00000000415	-	1.48302	12.7844	14.1784	4.29831E-05	2.65587E-05	0.734627
ENSSSCT00000000453	<i>LOC100512656</i>	100.688	257.946	247.467	2.11046E-05	0.00175953	0.839173
ENSSSCT00000000466	-	28.8327	120.955	90.6496	9.60385E-07	0.00111135	0.216165
ENSSSCT00000000653	<i>ART4</i>	6.8901	21.2499	25.0029	0.00172806	0.00116633	0.5523
ENSSSCT00000000721	<i>RIMKLB</i>	10.5302	35.0587	33.8067	2.46281E-05	0.000640076	0.874476
ENSSSCT00000000823	<i>LOC100516268</i>	5.87947	56.0779	84.3954	3.71714E-11	2.24243E-12	0.062653
ENSSSCT00000000860	-	5.28353	17.5883	20.088	6.78304E-05	0.000148809	0.573854
ENSSSCT00000000861	<i>ADAMTS20</i>	0.303892	5.38679	4.60712	0.000015395	0.000156296	0.606927
ENSSSCT00000000865	<i>LOC100523377</i>	31.1369	6.86799	10.0046	0.000009887	0.00198078	0.303744
ENSSSCT00000000873	<i>ANO6</i>	21.0425	5.01877	4.3158	1.24728E-05	0.000042193	0.689801
ENSSSCT00000001110	<i>F13A1</i>	50.0104	21.4185	16.2496	0.000306463	0.000210751	0.235955
ENSSSCT00000001118	<i>LOC100156744</i>	0.634654	3.70061	3.53659	5.27873E-06	5.20432E-05	0.864011
ENSSSCT00000001170	<i>DEK</i>	73.5159	27.2339	24.557	2.30973E-05	0.000274782	0.655782
ENSSSCT00000001559	<i>EHMT2</i>	10.5121	22.2643	31.4123	0.0016844	0.000331469	0.101591
ENSSSCT00000001578	-	0.595747	4.88688	7.9333	0.00203925	9.36943E-05	0.202157
ENSSSCT00000001634	<i>SLA-DMA</i>	18.0229	51.3643	71.4711	0.000273189	4.47574E-05	0.149476
ENSSSCT00000001649	<i>BMP5</i>	20.3223	2.87315	1.19554	9.58783E-07	9.22043E-08	0.135687
ENSSSCT00000001659	<i>KLHL31</i>	1.53225	23.766	22.2229	2.2582E-10	6.31087E-09	0.778875
ENSSSCT00000002068	-	10.4364	47.4677	48.8688	1.83811E-06	0.000024169	0.902281
ENSSSCT00000002139	<i>ISLR</i>	44.9009	97.2282	178.336	0.00105166	3.59986E-06	0.00345
ENSSSCT00000002535	<i>SPTB</i>	0.077862	0.88632	0.79334	0.00101509	0.00140178	0.789522
ENSSSCT00000002650	<i>FOS</i>	121.974	574.317	525.28	9.80571E-12	5.39935E-07	0.681179
ENSSSCT00000003101	<i>NDRG4</i>	11.0111	45.1962	52.5465	1.85875E-06	6.78263E-06	0.507131
ENSSSCT00000003324	-	119.203	31.5494	37.6875	1.69267E-08	0.000121415	0.436396
ENSSSCT00000003325	<i>LOC100738359</i>	57.7839	8.27616	14.864	1.77822E-10	4.94419E-05	0.06693
ENSSSCT00000003335	-	480.814	80.0326	104.312	0.000857753	0.00247421	0.676125
ENSSSCT00000003504	<i>LOC100522679</i>	53.2426	191.608	220.354	1.94322E-08	1.33421E-06	0.496357
ENSSSCT00000003505	-	12.5101	51.2438	43.9544	6.33373E-07	0.000241906	0.497564
ENSSSCT00000003749	<i>THAP3</i>	52.1491	250.674	258.85	0.000192033	0.000373699	0.913389
ENSSSCT00000003818	-	128.539	314.439	319.408	5.54269E-05	0.00180336	0.939347
ENSSSCT00000003900	-	36.3124	5.78134	9.3605	6.36209E-05	0.00209266	0.355071
ENSSSCT00000003969	<i>LOC100512418</i>	0.734579	10.4062	16.1182	0.00238562	0.000233143	0.333041
ENSSSCT00000004238	-	110.382	405.088	495.96	5.3172E-09	2.13685E-07	0.328053
ENSSSCT00000004287	<i>LOC100518433</i>	5.09375	22.4609	23.1588	3.66811E-05	0.000152804	0.906618
ENSSSCT00000004389	<i>LOC100522878</i>	0.062093	2.80441	2.15628	0.000417476	0.0012158	0.664733
ENSSSCT00000004397	<i>KCNQ4</i>	8.54151	20.525	27.2992	0.00225545	0.00059248	0.223388
ENSSSCT00000004479	-	815.883	331.762	269.339	9.72972E-05	0.0001633	0.312958
ENSSSCT00000004681	<i>PKIB</i>	12.3564	36.1	37.5871	0.000993926	0.00283801	0.875467
ENSSSCT00000005137	<i>COPS2</i>	60.3184	24.6311	16.6278	0.000648629	0.000124106	0.159321
ENSSSCT00000005254	<i>DLL4</i>	6.30871	25.8679	38.1767	6.292E-07	7.7244E-08	0.074874
ENSSSCT00000005307	<i>LOC100156280</i>	0.538897	35.2661	32.0297	3.11174E-06	2.85292E-06	0.75942
ENSSSCT00000005394	<i>SERPINB8</i>	38.5905	12.9768	10.0351	0.000302087	0.000234485	0.442101
ENSSSCT00000005572	<i>LGALS3</i>	249.381	64.2606	74.7164	4.0865E-09	4.06736E-05	0.500065
ENSSSCT00000005607	<i>SIX1</i>	35.551	4.93901	3.92381	1.68357E-06	2.46893E-06	0.663166
ENSSSCT00000005709	<i>CNTLN</i>	4.74629	1.18599	0.54834	0.00115388	0.000195465	0.222821
ENSSSCT00000005726	<i>PTPRD</i>	0.068575	2.2472	1.16016	3.46064E-05	0.000855503	0.106744
ENSSSCT00000005777	<i>PGM5</i>	15.617	39.7176	74.588	0.000749345	1.73833E-06	0.004693
ENSSSCT00000005828	<i>TLE1</i>	5.29465	18.1779	29.2317	1.98767E-05	4.36133E-07	0.03382
ENSSSCT00000005925	<i>NOR-1</i>	0.15225	4.43646	4.47565	1.34427E-06	3.62512E-07	0.974751
ENSSSCT00000005974	-	159.703	49.5569	52.7781	4.08278E-05	0.00109235	0.832232
ENSSSCT00000006000	<i>SVEP1</i>	19.4418	39.0081	50.6485	0.00155073	0.000870388	0.206852
ENSSSCT00000006020	<i>SAL1</i>	22.8415	0.27144	1.03559	6.8527E-07	1.07385E-06	0.190784

ENSSSCT00000006061 -	0.491077	6.84057	7.91098	0.000453812	0.000145568	0.704981
ENSSSCT00000006198 <i>SLC25A25</i>	1.23753	12.4345	8.87978	7.8023E-06	0.000260297	0.277035
ENSSSCT00000006734 <i>CA3</i>	415.002	1675.25	1394.62	8.36942E-09	5.51052E-05	0.431428
ENSSSCT00000006769 <i>LY96</i>	52.8922	12.1602	13.5723	0.000070514	0.000725699	0.792557
ENSSSCT00000006968 <i>LOC100157276</i>	13.5682	63.4789	73.7322	2.52601E-10	3.31045E-08	0.46622
ENSSSCT00000007026 <i>LOC100152827</i>	3.03081	18.7174	15.3349	0.000156893	0.00143797	0.53684
ENSSSCT00000007089 <i>CRABP2</i>	27.2033	1.16379	1.91951	1.58262E-07	6.26996E-07	0.497518
ENSSSCT00000007206 <i>LOC100156358</i>	642.239	45.8104	26.045	0	0	0.088849
ENSSSCT00000007358 <i>PHGDH</i>	76.3192	20.0056	27.6773	3.93951E-08	0.000728241	0.173569
ENSSSCT00000007365 -	34.0376	0.44948	0.20556	1.68312E-07	3.10525E-08	0.512963
ENSSSCT00000007366 <i>TBX15</i>	28.5737	0.27935	0.12796	1.92701E-08	4.1306E-09	0.51387
ENSSSCT00000007380 <i>IGSF3</i>	1.41157	6.49788	7.0319	6.42231E-05	0.000120498	0.769762
ENSSSCT00000007570 <i>HFM1</i>	1.74185	0.09081	0.1235	0.000408127	0.000452501	0.769262
ENSSSCT00000007604 <i>CYR61</i>	48.8274	109.424	170.969	0.00032815	1.59826E-05	0.029043
ENSSSCT00000007644 <i>MSR1</i>	39.5029	6.65058	4.34882	5.90505E-09	6.61158E-09	0.252608
ENSSSCT00000007702 <i>AP3M2</i>	0.63404	11.0278	7.07188	1.43518E-05	0.000276836	0.193464
ENSSSCT00000007971 <i>ACSS2</i>	47.6799	138.583	129.889	1.44564E-06	0.000491051	0.752088
ENSSSCT00000007976 -	5.67634	21.654	18.4108	5.17439E-06	0.000785125	0.487566
ENSSSCT00000008027 <i>NNAT</i>	245.825	780.522	770.279	2.86739E-07	9.05094E-05	0.950503
ENSSSCT00000008028 -	107.671	818.008	723.127	0	1.20288E-10	0.560088
ENSSSCT00000008036 <i>LOC100516472</i>	0.217402	3.2741	4.0835	4.17253E-05	6.50937E-06	0.489306
ENSSSCT00000008196 <i>PFDN4</i>	11.7458	2.32794	3.06121	0.000256382	0.00263023	0.590673
ENSSSCT00000008423 <i>SH2B2</i>	0.318221	5.04717	4.16062	0.00143642	0.00278426	0.689987
ENSSSCT00000008604 <i>LOC100525983</i>	8.97907	32.7391	42.188	0.000216785	6.45424E-05	0.324788
ENSSSCT00000008741 <i>LOC100737768</i>	546.023	1285.98	2366.52	0.000113746	5.06215E-07	0.004266
ENSSSCT00000008766 <i>RHBDL1</i>	14.7171	37.7667	49.8989	0.00143044	0.000398522	0.241173
ENSSSCT00000008781 <i>IGFALS</i>	3.51559	11.5113	12.7409	0.000908274	0.00118089	0.708467
ENSSSCT00000008919 <i>C3H2orf40</i>	3.64648	20.3681	38.5978	0.000438091	1.78212E-06	0.032424
ENSSSCT00000008984 <i>LOC100736878</i>	9.53598	59.0709	94.905	2.69171E-08	4.28656E-10	0.035293
ENSSSCT00000009149 <i>MEIS2</i>	22.2844	112.943	160.457	4.38707E-07	5.74398E-08	0.126511
ENSSSCT00000009150 -	5.76031	43.4375	39.0056	9.65827E-09	1.30149E-06	0.652178
ENSSSCT00000009162 <i>UGP2</i>	97.0471	44.6137	24.4248	0.000592889	4.81929E-06	0.007975
ENSSSCT00000009417 -	8.5567	29.7083	39.1371	0.00182186	0.000366729	0.340984
ENSSSCT00000009500 <i>NAT8L</i>	4.85501	38.4142	46.0529	4.48219E-06	1.97411E-06	0.505053
ENSSSCT00000009594 <i>LOC100520753</i>	7.71301	0.58469	0.17018	0.000106053	1.35864E-05	0.23171
ENSSSCT00000009793 <i>LOC100516986</i>	67.9734	33.4675	24.8929	0.00243476	0.000959664	0.202385
ENSSSCT00000009841 <i>SHROOM3</i>	0.78295	3.79368	5.10882	0.000149779	2.13587E-05	0.286158
ENSSSCT00000009861 <i>SFRP2</i>	5.92851	133.983	114.496	0	1.5099E-14	0.453349
ENSSSCT00000009862 -	6.31815	135.003	102.227	0	7.06102E-14	0.182507
ENSSSCT00000009960 <i>CCNA2</i>	5.1695	0.25681	0.52318	0.000318629	0.000945969	0.475172
ENSSSCT00000009978 <i>SYNPO2</i>	33.0735	101.964	127.776	3.85372E-07	2.89203E-06	0.273725
ENSSSCT00000009981 <i>PRSS12</i>	4.31358	27.2208	24.3316	9.11077E-10	9.84564E-07	0.613953
ENSSSCT00000010077 <i>SNCA</i>	9.31987	40.3937	41.4277	0.00165951	0.00230028	0.938894
ENSSSCT00000010092 -	28.0387	2.24242	4.60697	2.18851E-07	3.21515E-05	0.197848
ENSSSCT00000010125 <i>SCD5</i>	1.24834	9.33912	8.17888	3.68782E-06	5.57485E-05	0.633644
ENSSSCT00000010225 <i>LOC100153765</i>	100.645	32.6353	28.652	2.82745E-06	4.37284E-05	0.59111
ENSSSCT00000010326 <i>LOC100739376</i>	6.87714	57.9149	33.1059	2.14963E-08	0.000202744	0.028566
ENSSSCT00000010505 <i>SEMA4D</i>	0.630541	3.90734	6.59274	0.00033542	4.5967E-06	0.086017
ENSSSCT00000010634 <i>HPGD</i>	1.25537	18.6768	17.0185	8.52585E-07	2.97809E-06	0.742517
ENSSSCT00000010731 <i>GPR81</i>	107.544	49.8065	37.0981	0.00140129	0.000637653	0.22572
ENSSSCT00000010771 -	20.665	97.7254	62.1899	6.87564E-08	0.00163573	0.04986
ENSSSCT00000010999 -	1.03588	11.5768	18.5603	0.0022916	8.25196E-05	0.172385
ENSSSCT00000011108 -	24.7991	2.76033	3.58786	5.14072E-07	1.44584E-05	0.6117
ENSSSCT00000011118 <i>TBCE</i>	41.5018	1.88138	4.6918	0.000796943	0.002826	0.391554
ENSSSCT00000011329 <i>LOC100512562</i>	1.98957	7.80193	8.54357	0.000394513	0.000525918	0.745818
ENSSSCT00000011466 <i>O3FAR1</i>	20.5914	55.8982	66.6156	0.000283371	0.000385146	0.437866
ENSSSCT00000011467 <i>RBP4</i>	153.456	373.606	376.79	5.46354E-05	0.00174736	0.966981
ENSSSCT00000011523 <i>LOC100155158</i>	2.7575	8.88334	9.38055	0.00135837	0.00247332	0.845177
ENSSSCT00000011546 <i>SCD</i>	393.26	79.9783	103.35	1.56308E-11	8.22468E-06	0.214421
ENSSSCT00000011662 <i>HSPA12A</i>	25.8698	68.294	84.6942	5.11501E-05	8.72566E-05	0.302319

ENSSSCT00000011714	ZFP36	91.5209	248.35	375.47	9.78925E-06	1.29585E-06	0.043091
ENSSSCT00000011848	LOC100517234	8.75014	59.8772	81.8087	2.99955E-07	4.21443E-08	0.199329
ENSSSCT00000012011	LOC10052451E	7.39319	24.1512	25.6468	0.000360856	0.000970091	0.814703
ENSSSCT00000012032	AQP3	2286.68	617.971	593.643	3.09743E-07	1.63623E-05	0.852077
ENSSSCT00000012056	BAMBI	5.73567	16.4201	21.9992	0.00238229	0.000453221	0.268955
ENSSSCT00000012082	SSC.9229	35.0697	12.8273	8.08263	9.84114E-05	1.42759E-05	0.096663
ENSSSCT00000012249	COL6A5	0.959938	23.9053	13.3499	0	8.16902E-13	0.005172
ENSSSCT00000012332	CSRNP1	10.7311	32.0048	42.391	6.11155E-05	2.75029E-05	0.204061
ENSSSCT00000012345	-	1.35036	15.4032	14.0972	0.000479323	0.000535509	0.786137
ENSSSCT00000012432	COL7A1	0.247985	1.61228	2.01505	9.58246E-05	2.40794E-05	0.453306
ENSSSCT00000012697	SLC6A6	18.5476	3.9863	5.40134	2.99205E-05	0.00154068	0.453196
ENSSSCT00000012807	-	2.7483	14.6729	12.9271	1.39503E-06	9.42821E-05	0.604216
ENSSSCT00000012990	DTX3L	0.356931	5.73486	3.22688	1.85291E-05	0.000803712	0.101905
ENSSSCT00000013068	CD47	30.8948	10.6468	5.99282	0.00078725	4.60741E-05	0.133509
ENSSSCT00000013158	ADAMTS1	22.9845	120.608	215.977	7.85372E-13	5.61773E-14	0.004641
ENSSSCT00000013277	ACE2	31.3632	178.947	93.982	1.59872E-14	0.000161728	0.001717
ENSSSCT00000013473	KDM5C	4.97272	12.434	13.8198	0.000835532	0.00221337	0.641515
ENSSSCT00000013944	GABRE	29.291	9.15022	7.60472	0.000114939	0.000201972	0.577981
ENSSSCT00000014289	FADS2	16.7341	40.906	63.8313	0.0013893	5.13889E-05	0.050191
ENSSSCT00000014597	LDHA	176.965	85.6018	53.7094	0.00104323	4.80873E-05	0.028641
ENSSSCT00000014614	NUCB2	11.4172	3.31033	2.13052	0.00121452	0.000243355	0.354901
ENSSSCT00000014641	DKK3	4.11561	18.6653	16.2039	3.05887E-06	0.000219988	0.559788
ENSSSCT00000014792	-	18.8578	0.7811	0.54273	1.40185E-05	5.85176E-06	0.724542
ENSSSCT00000014800	-	18.2731	141.855	134.329	0	1.62779E-11	0.797034
ENSSSCT00000015009	JUNB	35.4822	77.6914	125.291	0.00194994	4.81813E-05	0.026377
ENSSSCT00000015061	DNAJB1	87.0765	232.487	256.824	8.88787E-06	0.000170335	0.62759
ENSSSCT00000015138	C19ORF44	0.738658	5.17631	6.24356	0.00127316	0.000372917	0.603829
ENSSSCT00000015164	-	1.32679	8.52902	6.14627	1.38117E-05	0.00110885	0.247728
ENSSSCT00000015440	VCAN	15.0232	1.96449	3.11276	7.99361E-15	3.35069E-07	0.081156
ENSSSCT00000015542	SEMA6A	5.30858	16.7749	21.3666	5.37938E-05	3.69788E-05	0.285961
ENSSSCT00000015640	-	43.5462	12.5097	8.71442	2.20024E-05	1.06033E-05	0.275583
ENSSSCT00000015641	-	349.085	127.677	127.788	6.70995E-06	0.000522934	0.996629
ENSSSCT00000015654	LOC10051536E	8.31818	21.0327	24.7322	0.00237111	0.00209972	0.510941
ENSSSCT00000015660	EGR1	19.7219	190.745	296.842	0	0	0.030495
ENSSSCT00000015663	EGR1	27.9806	226.298	373.95	0	0	0.014917
ENSSSCT00000015920	LOC10051978E	66.6163	18.422	22.6165	4.39003E-05	0.0023905	0.53745
ENSSSCT00000016076	HBB	993.5	2531.68	3804.58	9.07969E-05	1.18005E-05	0.082491
ENSSSCT00000016185	UCP2	39.342	108.581	115.324	1.06551E-05	0.000273189	0.769406
ENSSSCT00000016216	-	429.96	1200.18	1347.22	2.14895E-05	0.000174216	0.620993
ENSSSCT00000016240	THRSP	1004.56	2237.15	2481.07	0.000324763	0.00176939	0.623574
ENSSSCT00000016242	THRSP	1006.37	2240.46	2498.19	0.000326852	0.00166929	0.605671
ENSSSCT00000016331	-	1.45849	6.856	13.5369	0.000797088	1.52924E-06	0.017608
ENSSSCT00000016375	DDX10	16.3159	2.34918	2.9275	0.00112178	0.00247421	0.760751
ENSSSCT00000016638	-	63.5293	224.217	386.859	1.79289E-07	2.63391E-09	0.008083
ENSSSCT00000016779	LOC10062450E	74.2575	24.117	25.8378	8.53656E-06	0.000740108	0.785725
ENSSSCT00000016952	-	2.15924	13.7189	12.8471	0.000762209	0.00148831	0.852802
ENSSSCT00000016964	-	1.79517	7.7843	9.56226	0.000184051	0.000115188	0.447544
ENSSSCT00000016988	LOC100738612	14.8788	84.8961	76.2393	6.15583E-09	3.62088E-06	0.631815
ENSSSCT00000017115	LOC100516112	13.197	1.30248	0.99316	0.00034169	0.000154595	0.755383
ENSSSCT00000017164	-	0.081332	7.44185	2.9931	0.00001686	0.000977617	0.09156
ENSSSCT00000017182	LOC10062395E	0.754794	9.16516	9.39395	0.000520248	0.00035501	0.948735
ENSSSCT00000017282	NR4A2	2.92001	10.7224	21.8086	0.00151934	2.41676E-06	0.011149
ENSSSCT00000017314	GRB14	0.343396	11.4812	5.42962	8.29991E-07	0.000106332	0.022458
ENSSSCT00000017404	LOC100515172	38.26	0.96291	6.93062	2.33869E-08	3.24077E-05	0.004667
ENSSSCT00000017523	CLK1	11.8195	44.3788	47.9688	1.62603E-06	3.00821E-05	0.723048
ENSSSCT00000017744	NGEF	7.62675	0.8133	0.55162	0.00163144	0.000504756	0.686507
ENSSSCT00000017761	LOC10015260E	10.1199	1.72542	1.40036	6.03756E-05	5.74281E-05	0.709419
ENSSSCT00000018091	LOC100511484	2.48969	12.4819	11.226	0.000508527	0.00218171	0.742404
ENSSSCT00000018099	LOC10051750E	0.773013	4.70871	3.5947	7.23588E-06	0.000520405	0.333077
ENSSSCT00000018104	LOC10051683E	17.7027	1.07656	2.55662	4.70731E-06	9.58211E-05	0.218429

ENSSSCT00000018432 <i>PLK2</i>	10.7082	44.2885	50.2165	1.62603E-08	7.53114E-07	0.547166
ENSSSCT00000018501 <i>DUSP1</i>	106.004	719.276	1135.05	0	1.77636E-15	0.0422
ENSSSCT00000018610 -	1587.14	756.654	533.844	0.00204386	0.000278879	0.09961
ENSSSCT00000018664 <i>LOC100525071</i>	82.4734	2.98864	4.08579	0	4.44089E-15	0.478131
ENSSSCT00000018968 <i>FKBP10</i>	25.0298	8.07692	6.30367	0.00226136	0.00124833	0.574193
ENSSSCT00000019031 -	65.5583	142.244	171.34	0.00053101	0.00101331	0.364768
ENSSSCT00000019294 <i>LOC100520269</i>	9.81031	48.1672	47.2999	1.94422E-07	1.04085E-05	0.936947

Table S3. The primers information of macrophages and inflammation related genes.

Target genes	Sequences of primers (5'→3')	Products length	GeneBank accession No.
<i>CD14</i>	F:CAGGCAGGCAACATCCCTCATT R:GTCCTCACTCTTTGGCAGACTTTGG	160	NM_001097445.2
<i>MCP-1</i>	F:CAGCAGCAAGTGTCTAAAGAAG R:AGGGCAAGTTAGAAGGAAATGAA	194	NM_214214.1
<i>TNF-α</i>	F:CCCCAGAAGGAAGAGTTTC R:CGGGCTTATCTGAGGTTTGA	92	NM_214022.1
<i>IL-10</i>	F:TGAAGAGTGCCTTTAGCAAGCTC R:CTCATCTTCATCGTCATGTAGGC	106	NM_214041.1
<i>IL-6</i>	F:CACCGGTCTTGTGGAGTTTC R:GTGGTGGCTTTGTCTGGATT	150	NM_214399.1
<i>IL-8</i>	F:GGCAGTTTTCTGCTTTCT R:CAGTGGGGTCCACTCTCAAT	153	NM_213867.1
<i>IL-1B</i>	F: AAAGGGGACTTGAAGAGAG R: CTGCTTGAGAGGTGCTGATGT	286	NM_214055
<i>ACTB</i>	F:TCTGGCACCACACCTTCT R:TGATCTGGGTCATCTTCTCAC	114	DQ178122
<i>TBP</i>	F:GATGGACGTTTCGGTTTAGG R:AGCAGCACAGTACGAGCAA	124	DQ178129
<i>TOP2B</i>	F:AACTGGATGATGCTAATGATGCT R:TGGAAAACTCCGTATCTGTCTC	137	AF222921

Note: *β-actin (ACTB)*, *TATA box binding protein (TBP)*, and *topoisomerase IIβ (TOP2B)* were used as endogenous control genes.

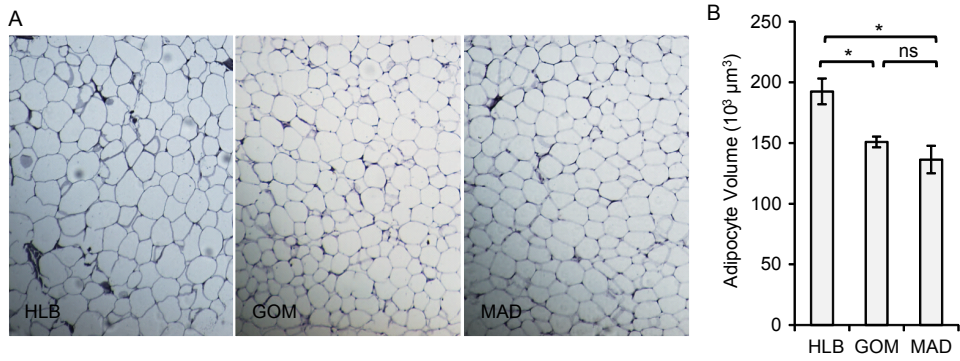


Figure S1. Phenotype analysis of three adipose tissues. (A) Representative pictures of the enlarged adipocytes (20x). (B) Adipocyte volume of VATs and SAT. One-Way ANOVA, Tukey multiple range test, Mean \pm SD. * indicate $P < 0.05$; ns: not significant.

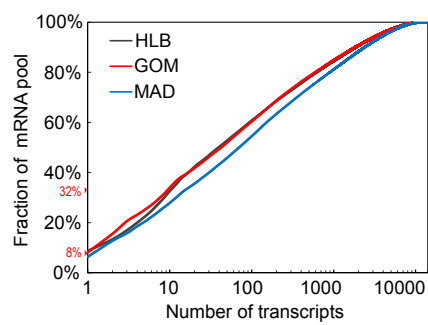


Figure S2. Complexity of transcriptomes of three adipose tissues.

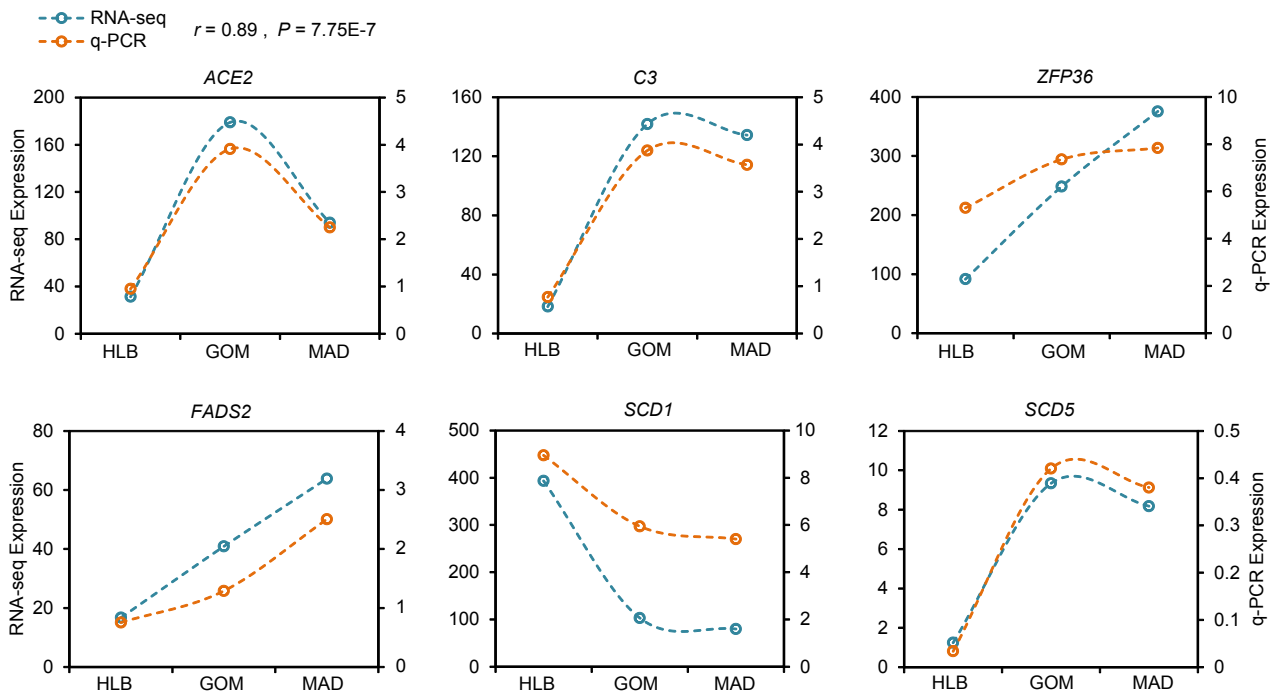


Figure S3 Validation of gene expression by Q-PCR. The data presented in Y-axis indicated the mRNA expression of Q-PCR and RNA-seq. The Pearson correlation coefficient (r) and the P -value were shown for the six genes.