

Supplementary Table 1. The training set of genes/proteins obtained by literature-data mining

Rank	GeneID	Symbol	False discovery rate
1	9370	ADIPOQ	2.62E-285
2	80339	PNPLA3	6.20E-278
3	5468	PPARG	3.29E-200
4	5465	PPARA	1.21E-150
5	26291	FGF21	1.35E-140
6	5950	RBP4	6.64E-133
7	2875	GPT	6.06E-132
8	6720	SREBF1	1.25E-130
9	3952	LEP	1.47E-120
10	10062	NR1H3	1.73E-119
11	4023	LPL	3.13E-115
12	56729	RETN	3.97E-109
13	2167	FABP4	3.49E-104
14	338	APOB	2.65E-97
15	1401	CRP	3.63E-86
16	10135	NAMPT	2.14E-85
17	79068	FTO	4.92E-85
18	348	APOE	8.15E-85
19	116519	APOA5	7.97E-85
20	345	APOC3	5.94E-83
21	1071	CETP	8.19E-83
22	3990	LIPC	1.34E-77
23	335	APOA1	1.07E-75
24	4547	MTTP	4.52E-74
25	3630	INS	5.03E-72
26	197	AHSG	8.62E-71
27	5919	RARRES2	1.77E-70
28	5444	PON1	3.32E-70
29	3077	HFE	2.24E-69
30	155	ADRB3	1.28E-68
31	9971	NR1H4	2.44E-67
32	255738	PCSK9	3.58E-67
33	7376	NR1H2	1.40E-66
34	252995	FNDC5	3.74E-65
35	5467	PPARD	4.53E-65
36	3953	LEPR	1.25E-62
37	53345	TM6SF2	1.73E-62
38	632	BGLAP	3.68E-62
39	19	ABCA1	6.63E-61
40	2646	GCKR	2.08E-60

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
41	2678	GGT1	1.93E-59
42	2169	FABP2	1.85E-56
43	145264	SERPINA12	9.17E-55
44	51738	GHRL	2.78E-54
45	282617	IFNL3	3.92E-53
46	10891	PPARGC1A	7.32E-52
47	7124	TNF	1.12E-51
48	23411	SIRT1	1.34E-51
49	23175	LPIN1	7.21E-51
50	3172	HNF4A	7.57E-51
51	6319	SCD	8.47E-51
52	3290	HSD11B1	1.30E-50
53	6934	TCF7L2	9.25E-50
54	5054	SERPINE1	4.25E-48
55	55908	ANGPTL8	2.87E-47
56	6462	SHBG	1.44E-46
57	948	CD36	1.15E-44
58	1268	CNR1	3.73E-42
59	3949	LDLR	5.37E-42
60	3667	IRS1	2.13E-41
61	51085	MLXIPL	4.60E-41
62	55600	ITLN1	3.39E-40
63	3569	IL6	1.17E-39
64	3875	KRT18	1.95E-39
65	949	SCARB1	5.86E-38
66	2805	GOT1	4.07E-36
67	79602	ADIPOR2	1.33E-35
68	9965	FGF19	1.41E-35
69	1636	ACE	1.74E-35
70	1581	CYP7A1	1.75E-35
71	51094	ADIPOR1	3.33E-35
72	6721	SREBF2	3.18E-33
73	57817	HAMP	1.38E-32
74	10221	TRIB1	6.85E-32
75	8862	APLN	9.64E-32
76	2168	FABP1	6.93E-31
77	3479	IGF1	9.14E-31
78	337	APOA4	9.91E-31
79	177	AGER	3.20E-30
80	27329	ANGPTL3	5.36E-30
81	6927	HNF1A	6.89E-30

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
82	7040	TGFB1	1.21E-29
83	57104	PNPLA2	2.47E-29
84	4018	LPA	2.89E-29
85	5176	SERPINF1	2.86E-29
86	5167	ENPP1	1.64E-28
87	55937	APOM	3.58E-28
88	3934	LCN2	1.12E-27
89	336	APOA2	8.35E-26
90	4160	MC4R	2.42E-25
91	51141	INSIG2	2.47E-25
92	7352	UCP3	5.72E-25
93	9619	ABCG1	9.27E-25
94	7350	UCP1	1.29E-24
95	718	C3	1.28E-24
96	7941	PLA2G7	5.61E-24
97	7351	UCP2	1.01E-23
98	3988	LIPA	1.40E-23
99	5770	PTPN1	1.55E-23
100	6347	CCL2	2.04E-23
101	5360	PLTP	2.05E-23
102	2641	GCG	2.59E-23
103	1490	CTGF	2.65E-23
104	51129	ANGPTL4	3.53E-23
105	3991	LIPE	7.52E-23
106	185	AGTR1	1.11E-22
107	3931	LCAT	4.80E-22
108	7099	TLR4	5.39E-22
109	3992	FADS1	8.10E-22
110	9388	LIPG	8.59E-22
111	1803	DPP4	8.65E-22
112	63924	CIDEC	2.55E-21
113	3082	HGF	3.21E-21
114	1571	CYP2E1	5.09E-21
115	3162	HMOX1	5.79E-21
116	1374	CPT1A	1.11E-20
117	9415	FADS2	1.23E-20
118	375704	ENHO	1.51E-20
119	2308	FOXO1	1.98E-20
120	217	ALDH2	2.11E-20
121	4925	NUCB2	2.14E-20
122	1116	CHI3L1	2.41E-20

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
123	2194	FASN	3.09E-20
124	3170	FOXA2	4.51E-20
125	5346	PLIN1	4.63E-20
126	3156	HMGCR	1.16E-19
127	10644	IGF2BP2	1.93E-19
128	3606	IL18	2.75E-19
129	5806	PTX3	2.75E-19
130	2908	NR3C1	2.99E-19
131	8431	NROB2	3.01E-19
132	6696	SPP1	3.18E-19
133	79689	STEAP4	3.52E-19
134	5562	PRKAA1	4.66E-19
135	3643	INSR	6.50E-19
136	4524	MTHFR	1.08E-18
137	64241	ABCG8	1.34E-18
138	5265	SERPINA1	1.38E-18
139	154	ADRB2	1.71E-18
140	3627	CXCL10	2.21E-18
141	123	PLIN2	3.83E-18
142	4780	NFE2L2	6.14E-18
143	8856	NR1I2	1.01E-17
144	101928635	LOC101928635	1.03E-17
145	6648	SOD2	1.08E-17
146	6425	SFRP5	1.12E-17
147	6095	RORA	1.85E-17
148	183	AGT	3.24E-17
149	4846	NOS3	3.55E-17
150	64240	ABCG5	4.35E-17
151	57761	TRIB3	7.19E-17
152	114899	C1QTNF3	1.10E-16
153	3638	INSIG1	1.17E-16
154	8074	FGF23	1.88E-16
155	341	APOC1	3.27E-16
156	3605	IL17A	7.12E-16
157	3484	IGFBP1	7.39E-16
158	125	ADH1B	8.88E-16
159	169026	SLC30A8	9.26E-16
160	7421	VDR	1.92E-15
161	114548	NLRP3	2.22E-15
162	4035	LRP1	2.95E-15
163	9021	SOCS3	5.67E-15

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Rank	GeneID	Symbol	False discovery rate
164	563	AZGP1	1.37E-14
165	346	APOC4	1.40E-14
166	3995	FADS3	1.39E-14
167	6517	SLC2A4	1.39E-14
168	3383	ICAM1	1.67E-14
169	84649	DGAT2	1.70E-14
170	1463	NCAN	2.55E-14
171	2645	GCK	3.25E-14
172	6403	SELP	3.25E-14
173	2166	FAAH	5.71E-14
174	133522	PPARGC1B	7.43E-14
175	5168	ENPP2	7.39E-14
176	2099	ESR1	9.36E-14
177	2688	GH1	1.02E-13
178	4000	LMNA	1.02E-13
179	6401	SELE	1.42E-13
180	29116	MYLIP	1.62E-13
181	338557	FFAR4	1.61E-13
182	6288	SAAT1	2.10E-13
183	6414	SELENOP	3.28E-13
184	3087	HHEX	3.56E-13
185	3767	KCNJ11	3.65E-13
186	728441	GGT2	4.78E-13
187	3929	LBP	7.00E-13
188	3486	IGFBP3	1.08E-12
189	4852	NPY	1.20E-12
190	7498	XDH	1.22E-12
191	2475	MTOR	1.45E-12
192	8647	ABCB11	1.48E-12
193	7422	VEGFA	2.55E-12
194	627	BDNF	2.68E-12
195	79660	PPP1R3B	3.19E-12
196	7133	TNFRSF1B	3.54E-12
197	2695	GIP	4.88E-12
198	4843	NOS2	6.08E-12
199	3240	HP	7.05E-12
200	4879	NPPB	7.28E-12
201	3586	IL10	8.85E-12
202	6272	SORT1	8.89E-12
203	4982	TNFRSF11B	9.95E-12
204	338872	C1QTNF9	1.04E-11

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
205	2180	ACSL1	1.13E-11
206	4973	OLR1	1.28E-11
207	1489	CTF1	1.30E-11
208	5184	PEPD	1.61E-11
209	50616	IL22	2.04E-11
210	8694	DGAT1	2.22E-11
211	2896	GRN	2.56E-11
212	83854	ANGPTL6	3.55E-11
213	929	CD14	3.59E-11
214	1952	CELSR2	4.06E-11
215	5122	PCSK1	5.09E-11
216	1269	CNR2	5.18E-11
217	6256	RXRA	6.60E-11
218	344	APOC2	6.86E-11
219	2822	GPLD1	6.97E-11
220	8882	ZPR1	6.93E-11
221	207	AKT1	7.47E-11
222	5445	PON2	8.18E-11
223	3856	KRT8	8.81E-11
224	3091	HIF1A	9.29E-11
225	2696	GIPR	1.03E-10
226	5166	PDK4	1.13E-10
227	1906	EDN1	1.13E-10
228	1471	CST3	1.42E-10
229	32	ACACB	1.49E-10
230	4313	MMP2	1.70E-10
231	8788	DLK1	1.99E-10
232	4544	MTNR1B	2.31E-10
233	3146	HMGB1	2.51E-10
234	7412	VCAM1	3.48E-10
235	51548	SIRT6	3.55E-10
236	7391	USF1	3.88E-10
237	63892	THADA	4.35E-10
238	2784	GNB3	5.57E-10
239	5564	PRKAB1	5.77E-10
240	3553	IL1B	6.06E-10
241	29881	NPC1L1	6.23E-10
242	5563	PRKAA2	6.22E-10
243	3950	LECT2	6.43E-10
244	4318	MMP9	6.51E-10
245	2932	GSK3B	6.95E-10

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
246	174	AFP	7.02E-10
247	1050	CEBPA	8.65E-10
248	366	AQP9	8.63E-10
249	54901	CDKAL1	1.08E-09
250	1576	CYP3A4	1.36E-09
251	340895	MALRD1	1.38E-09
252	100533183	ZNF664-RFLNA	1.37E-09
253	1012	CDH13	1.82E-09
254	26608	TBL2	2.04E-09
255	23516	SLC39A14	2.29E-09
256	1191	CLU	2.42E-09
257	2264	FGFR4	2.75E-09
258	25813	SAMM50	2.84E-09
259	7097	TLR2	3.16E-09
260	9575	CLOCK	4.33E-09
261	8660	IRS2	4.45E-09
262	29780	PARVB	4.72E-09
263	5244	ABCB4	4.75E-09
264	355	FAS	5.36E-09
265	5329	PLAUR	5.44E-09
266	2303	FOXC2	6.32E-09
267	6928	HNF1B	6.71E-09
268	28	ABO	7.76E-09
269	158219	TTC39B	7.92E-09
270	6794	STK11	8.78E-09
271	10400	PEMT	9.53E-09
272	551	AVP	9.90E-09
273	3480	IGF1R	9.91E-09
274	285	ANGPT2	1.06E-08
275	58191	CXCL16	1.11E-08
276	221037	JMJD1C	1.11E-08
277	3481	IGF2	1.54E-08
278	1316	KLF6	1.74E-08
279	7450	VWF	1.88E-08
280	11132	CAPN10	2.18E-08
281	3039	HBA1	2.20E-08
282	85440	DOCK7	2.33E-08
283	54097	FAM3B	3.10E-08
284	79071	ELOVL6	3.09E-08
285	148113	CILP2	3.08E-08
286	26580	BSCL2	3.23E-08

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
287	2171	FABP5	3.44E-08
288	55829	SELENOS	3.43E-08
289	2690	GHR	3.67E-08
290	9201	DCLK1	4.39E-08
291	2740	GLP1R	4.80E-08
292	79143	MBOAT7	4.85E-08
293	2590	GALNT2	4.91E-08
294	114897	C1QTNF1	5.59E-08
295	221895	JAZF1	6.91E-08
296	2952	GSTT1	6.88E-08
297	80790	CMIP	7.32E-08
298	1149	CIDEA	8.33E-08
299	11001	SLC27A2	8.30E-08
300	9332	CD163	9.02E-08
301	51280	GOLM1	9.38E-08
302	3250	HPR	1.06E-07
303	3570	IL6R	1.17E-07
304	4353	MPO	1.33E-07
305	388581	C1QTNF12	1.34E-07
306	249	ALPL	1.56E-07
307	1573	CYP2J2	1.59E-07
308	4790	NFKB1	1.77E-07
309	590	BCHE	1.76E-07
310	23409	SIRT4	1.83E-07
311	1649	DDIT3	1.94E-07
312	55911	APOBR	2.09E-07
313	10468	FST	2.24E-07
314	91937	TIMD4	2.45E-07
315	326625	MMAB	2.44E-07
316	6280	S100A9	2.54E-07
317	4041	LRP5	2.58E-07
318	6774	STAT3	2.72E-07
319	4878	NPPA	2.97E-07
320	1499	CTNNB1	3.06E-07
321	3958	LGALS3	3.18E-07
322	57805	CCAR2	4.17E-07
323	2944	GSTM1	4.28E-07
324	1375	CPT1B	4.47E-07
325	7132	TNFRSF1A	4.52E-07
326	50507	NOX4	4.80E-07
327	6352	CCL5	5.03E-07

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
328	1950	EGF	5.31E-07
329	84226	C2orf16	5.84E-07
330	5741	PTH	5.87E-07
331	22926	ATF6	5.86E-07
332	151306	GPBAR1	6.02E-07
333	5599	MAPK8	6.04E-07
334	2494	NR5A2	6.22E-07
335	729230	CCR2	6.35E-07
336	8872	CDC123	6.92E-07
337	959	CD40LG	7.27E-07
338	9518	GDF15	7.33E-07
339	1240	CMKLR1	7.38E-07
340	22937	SCAP	7.36E-07
341	129787	TMEM18	7.34E-07
342	4153	MBL2	8.44E-07
343	5205	ATP8B1	9.67E-07
344	57118	CAMK1D	9.64E-07
345	5139	PDE3A	1.03E-06
346	101180976	IFNL4	1.03E-06
347	7103	TSPAN8	1.09E-06
348	2876	GPX1	1.11E-06
349	2309	FOXO3	1.17E-06
350	345275	HSD17B13	1.21E-06
351	56999	ADAMTS9	1.48E-06
352	1356	CP	1.48E-06
353	7466	WFS1	1.47E-06
354	2538	G6PC	1.75E-06
355	4049	LTA	1.78E-06
356	54741	LEPROT	1.83E-06
357	440503	PLIN5	1.82E-06
358	5743	PTGS2	1.94E-06
359	9935	MAFB	2.05E-06
360	1234	CCRS	2.48E-06
361	5446	PON3	2.52E-06
362	7076	TIMP1	2.56E-06
363	2244	FGB	2.60E-06
364	10577	NPC2	2.78E-06
365	84722	PSRC1	2.77E-06
366	1361	CPB2	2.78E-06
367	84647	PLA2G12B	3.07E-06
368	144348	ZNF664	3.06E-06

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
369	1030	CDKN2B	3.17E-06
370	25970	SH2B1	3.17E-06
371	4282	MIF	3.22E-06
372	3552	IL1A	3.47E-06
373	80168	MOGAT2	3.55E-06
374	80714	PBX4	3.54E-06
375	4598	MVK	3.62E-06
376	8639	AOC3	3.61E-06
377	6258	RXRG	3.95E-06
378	26060	APPL1	3.94E-06
379	55219	MACO1	4.07E-06
380	114884	OSBPL10	4.06E-06
381	145957	NRG4	4.05E-06
382	1514	CTSL	4.18E-06
383	727	C5	4.46E-06
384	5789	PTPRD	4.86E-06
385	5728	PTEN	4.91E-06
386	6715	SRD5A1	5.05E-06
387	54622	ARL15	5.30E-06
388	84699	CREB3L3	5.29E-06
389	1432	MAPK14	5.59E-06
390	347	APOD	5.68E-06
391	1066	CES1	5.90E-06
392	7436	VLDLR	5.89E-06
393	51422	PRKAG2	5.87E-06
394	64102	TNMD	5.95E-06
395	136259	KLF14	5.93E-06
396	59272	ACE2	6.09E-06
397	10165	SLC25A13	6.57E-06
398	1369	CPN1	6.69E-06
399	3572	IL6ST	6.71E-06
400	4899	NRF1	6.78E-06
401	3455	IFNAR2	7.04E-06
402	51704	GPRC5B	7.49E-06
403	2833	CXCR3	7.64E-06
404	8701	DNAH11	8.37E-06
405	9663	LPIN2	8.35E-06
406	127018	LYPLAL1	8.33E-06
407	152831	KLB	8.31E-06
408	1588	CYP19A1	8.37E-06
409	2572	GAD2	8.36E-06

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Rank	GeneID	Symbol	False discovery rate
410	10449	ACAA2	9.24E-06
411	59286	UBL5	9.21E-06
412	9970	NR1I3	9.60E-06
413	53335	BCL11A	9.58E-06
414	1734	DIO2	9.91E-06
415	2638	GC	1.06E-05
416	5506	PPP1R3A	1.13E-05
417	57794	SUGP1	1.13E-05
418	196	AHR	1.17E-05
419	8204	NRIP1	1.29E-05
420	22837	COBLL1	1.36E-05
421	284	ANGPT1	1.37E-05
422	3784	KCNQ1	1.38E-05
423	2524	FUT2	1.60E-05
424	1586	CYP17A1	1.62E-05
425	114294	LACTB	1.62E-05
426	284111	SLC13A5	1.62E-05
427	4889	NPY5R	1.77E-05
428	4092	SMAD7	1.79E-05
429	10452	TOMM40	1.84E-05
430	53632	PRKAG3	2.08E-05
431	51703	ACSL5	2.25E-05
432	2152	F3	2.26E-05
433	7098	TLR3	2.40E-05
434	5140	PDE3B	2.42E-05
435	79626	TNFAIP8L2	2.42E-05
436	1585	CYP11B2	2.44E-05
437	51099	ABHD5	2.60E-05
438	2660	MSTN	2.76E-05
439	10999	SLC27A4	2.79E-05
440	84811	BUD13	2.79E-05
441	4864	NPC1	2.82E-05
442	3454	IFNAR1	2.89E-05
443	9235	IL32	2.88E-05
444	2621	GAS6	2.95E-05
445	100527978	TMEM56-RWDD3	3.15E-05
446	2495	FTH1	3.26E-05
447	7128	TNFAIP3	3.43E-05
448	10628	TXNIP	3.59E-05
449	27202	CSAR2	3.63E-05
450	3576	CXCL8	3.64E-05

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Rank	GeneID	Symbol	False discovery rate
451	2512	FTL	3.75E-05
452	6198	RPS6KB1	3.89E-05
453	8839	WISP2	4.10E-05
454	9159	PCSK7	4.10E-05
455	3557	IL1RN	4.33E-05
456	8315	BRAP	4.35E-05
457	3309	HSPA5	4.57E-05
458	6484	ST3GAL4	4.61E-05
459	22943	DKK1	4.67E-05
460	2056	EPO	4.91E-05
461	26762	HAVCR1	5.71E-05
462	2806	GOT2	5.80E-05
463	9104	RGN	6.12E-05
464	364	AQP7	6.46E-05
465	2181	ACSL3	6.45E-05
466	2222	FDFT1	6.43E-05
467	6554	SLC10A1	6.42E-05
468	1493	CTLA4	6.61E-05
469	23410	SIRT3	6.67E-05
470	7077	TIMP2	6.79E-05
471	5565	PRKAB2	7.09E-05
472	200186	CRTC2	7.08E-05
473	1051	CEBPB	7.08E-05
474	2155	F7	7.23E-05
475	80831	APOL5	7.38E-05
476	124989	EFCAB13	7.36E-05
477	389400	GFRAL	7.35E-05
478	23081	KDM4C	7.36E-05
479	56034	PDGFC	7.35E-05
480	11274	USP18	7.72E-05
481	4233	MET	7.91E-05
482	4040	LRP6	7.96E-05
483	5320	PLA2G2A	8.10E-05
484	8567	MADD	8.47E-05
485	4088	SMAD3	8.87E-05
486	1293	COL6A3	8.86E-05
487	2100	ESR2	9.10E-05
488	2950	GSTP1	9.22E-05
489	111	ADCY5	9.24E-05
490	6364	CCL20	9.50E-05
491	150	ADRA2A	9.67E-05

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
492	186	AGTR2	9.65E-05
493	1080	CFTR	9.70E-05
494	127665	ZNF648	9.93E-05
495	389941	C1QL3	9.91E-05
496	126	ADH1C	9.93E-05
497	1544	CYP1A2	1.02E-04
498	3565	IL4	1.04E-04
499	1622	DBI	1.04E-04
500	7423	VEGFB	1.04E-04
501	7035	TFPI	1.06E-04
502	9607	CARTPT	1.08E-04
503	118	ADD1	1.09E-04
504	350	APOH	1.09E-04
505	6833	ABCC8	1.11E-04
506	7039	TGFA	1.11E-04
507	10370	CITED2	1.12E-04
508	10587	TXNRD2	1.12E-04
509	3485	IGFBP2	1.14E-04
510	4306	NR3C2	1.18E-04
511	10580	SORBS1	1.22E-04
512	54984	PINX1	1.21E-04
513	84676	TRIM63	1.21E-04
514	6464	SHC1	1.24E-04
515	351	APP	1.25E-04
516	101928448	C5orf67	1.27E-04
517	8743	TNFSF10	1.28E-04
518	4853	NOTCH2	1.29E-04
519	3357	HTR2B	1.30E-04
520	6783	SULT1E1	1.36E-04
521	468	ATF4	1.37E-04
522	50964	SOST	1.39E-04
523	5105	PCK1	1.46E-04
524	6822	SULT2A1	1.46E-04
525	6932	TCF7	1.46E-04
526	4837	NNMT	1.51E-04
527	6424	SFRP4	1.51E-04
528	7157	TP53	1.54E-04
529	284207	METRNL	1.59E-04
530	284358	MAMSTR	1.59E-04
531	7021	TFAP2B	1.75E-04
532	7840	ALMS1	1.75E-04

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
533	11082	ESM1	1.74E-04
534	655	BMP7	1.77E-04
535	6514	SLC2A2	1.80E-04
536	6376	CX3CL1	1.82E-04
537	3568	IL5RA	1.86E-04
538	5571	PRKAG1	1.93E-04
539	91351	DDX60L	1.95E-04
540	283537	SLC46A3	1.94E-04
541	441250	TYW1B	1.94E-04
542	367	AR	2.01E-04
543	857	CAV1	2.04E-04
544	3791	KDR	2.33E-04
545	3375	IAPP	2.34E-04
546	7056	THBD	2.33E-04
547	2878	GPX3	2.34E-04
548	1407	CRY1	2.41E-04
549	5313	PKLR	2.41E-04
550	57016	AKR1B10	2.40E-04
551	635	BHMT	2.48E-04
552	4017	LOXL2	2.47E-04
553	4240	MFGE8	2.47E-04
554	1524	CX3CR1	2.54E-04
555	5648	MASP1	2.63E-04
556	6678	SPARC	2.68E-04
557	9611	NCOR1	2.71E-04
558	10599	SLCO1B1	2.71E-04
559	9489	PGS1	2.75E-04
560	55160	ARHGEF10L	2.75E-04
561	57523	NYNRIN	2.74E-04
562	4060	LUM	2.76E-04
563	6434	TRA2B	3.12E-04
564	51380	CSAD	3.22E-04
565	144108	SPTY2D1	3.22E-04
566	392636	AGMO	3.21E-04
567	31	ACACA	3.39E-04
568	9555	H2AFY	3.48E-04
569	389421	LIN28B	3.48E-04
570	1535	CYBA	3.50E-04
571	6279	S100A8	3.54E-04
572	947	CD34	3.58E-04
573	10998	SLC27A5	3.70E-04

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
574	22864	R3HDM2	3.69E-04
575	152404	IGSF11	3.69E-04
576	286046	XKR6	3.68E-04
577	729359	PLIN4	3.67E-04
578	100132074	FOXO6	3.67E-04
579	9290	GPR55	3.72E-04
580	3308	HSPA4	3.87E-04
581	6647	SOD1	3.87E-04
582	6374	CXCL5	3.91E-04
583	54658	UGT1A1	3.94E-04
584	2243	FGA	3.97E-04
585	2729	GCLC	4.00E-04
586	136	ADORA2B	4.11E-04
587	51057	WDPCP	4.17E-04
588	80763	SPX	4.16E-04
589	84978	FRMD5	4.15E-04
590	6317	SERPINB3	4.19E-04
591	3816	KLK1	4.41E-04
592	1118	CHIT1	4.52E-04
593	133	ADM	4.58E-04
594	1582	CYP8B1	4.70E-04
595	57089	ENTPD7	4.70E-04
596	83468	GLT8D2	4.69E-04
597	140469	MYO3B	4.68E-04
598	59067	IL21	4.70E-04
599	134	ADORA1	4.70E-04
600	5629	PROX1	4.82E-04
601	54567	DLL4	4.81E-04
602	3959	LGALS3BP	4.92E-04
603	2335	FN1	4.93E-04
604	4314	MMP3	5.10E-04
605	10308	ZNF267	5.23E-04
606	80833	APOL3	5.22E-04
607	114881	OSBPL7	5.21E-04
608	221955	DAGLB	5.21E-04
609	7030	TFE3	5.25E-04
610	875	CBS	5.35E-04
611	885	CCK	5.36E-04
612	847	CAT	5.45E-04
613	6580	SLC22A1	5.74E-04
614	9734	HDAC9	5.73E-04

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
615	57451	TENM2	5.79E-04
616	64801	ARV1	5.78E-04
617	137964	GPAT4	5.77E-04
618	1026	CDKN1A	5.91E-04
619	90865	IL33	5.95E-04
620	2170	FABP3	5.95E-04
621	8651	SOCS1	6.12E-04
622	5681	PSKH1	6.40E-04
623	9953	HS3ST3B1	6.39E-04
624	26998	FETUB	6.38E-04
625	29923	HILPDA	6.37E-04
626	55206	SBNO1	6.36E-04
627	55532	SLC30A10	6.34E-04
628	57146	TMEM159	6.33E-04
629	79966	SCD5	6.32E-04
630	84467	FBN3	6.31E-04
631	347148	QRFP	6.30E-04
632	3123	HLA-DRB1	6.29E-04
633	3672	ITGA1	6.53E-04
634	3587	IL10RA	6.67E-04
635	11093	ADAMTS13	6.80E-04
636	6609	SMPD1	6.80E-04
637	8549	LGR5	6.79E-04
638	2998	GYS2	6.93E-04
639	10351	ABCA8	6.92E-04
640	55568	GALNT10	6.90E-04
641	79135	APOO	6.89E-04
642	2252	FGF7	7.19E-04
643	30061	SLC40A1	7.34E-04
644	1520	CTSS	7.49E-04
645	4710	NDUFB4	7.57E-04
646	27034	ACAD8	7.56E-04
647	57563	KLHL8	7.54E-04
648	65991	FUNDC2	7.53E-04
649	506	ATP5F1B	7.91E-04
650	5914	RARA	8.05E-04
651	2648	KAT2A	8.22E-04
652	3422	IDI1	8.23E-04
653	7069	THRSP	8.22E-04
654	10439	OLFM1	8.21E-04
655	11000	SLC27A3	8.20E-04

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
656	56670	SUCNR1	8.18E-04
657	158038	LINGO2	8.17E-04
658	1029	CDKN2A	8.21E-04
659	406	ARNTL	8.46E-04
660	3673	ITGA2	8.57E-04
661	7356	SCGB1A1	8.60E-04
662	319	APOF	8.88E-04
663	7092	TLL1	8.87E-04
664	9023	CH25H	8.85E-04
665	55304	SPTLC3	8.84E-04
666	57552	NCEH1	8.83E-04
667	84224	NBPF3	8.81E-04
668	84450	ZNF512	8.80E-04
669	3329	HSPD1	9.12E-04
670	272	AMPD3	9.57E-04
671	23305	ACSL6	9.55E-04
672	27141	CIDEB	9.54E-04
673	51614	ERGIC3	9.52E-04
674	54832	VPS13C	9.51E-04
675	57572	DOCK6	9.50E-04
676	60343	FAM3A	9.48E-04
677	143686	SESN3	9.47E-04
678	383	ARG1	9.62E-04
679	5771	PTPN2	9.61E-04
680	5294	PIK3CG	9.76E-04
681	4283	CXCL9	9.77E-04
682	3651	PDX1	9.94E-04
683	4855	NOTCH4	9.92E-04
684	846	CASR	1.01E-03
685	54957	TXNL4B	1.02E-03
686	55151	TMEM38B	1.02E-03
687	166929	SGMS2	1.01E-03
688	1208	CLPS	1.10E-03
689	1990	CELA1	1.10E-03
690	2267	FGL1	1.09E-03
691	9275	BCL7B	1.09E-03
692	9453	GGPS1	1.09E-03
693	54579	UGT1A5	1.09E-03
694	79831	KDM8	1.09E-03
695	114805	GALNT13	1.09E-03
696	114883	OSBPL9	1.08E-03

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
697	139760	GPR119	1.08E-03
698	50486	G0S2	1.17E-03
699	89796	NAV1	1.17E-03
700	126129	CPT1C	1.16E-03
701	26279	PLA2G2D	1.25E-03
702	55167	MSL2	1.25E-03
703	140733	MACROD2	1.25E-03
704	376497	SLC27A1	1.25E-03
705	629	CFB	1.28E-03
706	4929	NR4A2	1.30E-03
707	4015	LOX	1.32E-03
708	105	ADARB2	1.33E-03
709	30010	NXPH1	1.33E-03
710	57554	LRRC7	1.33E-03
711	57678	GPAM	1.32E-03
712	1147	CHUK	1.36E-03
713	2147	F2	1.36E-03
714	10160	FARP1	1.41E-03
715	64771	C6orf106	1.41E-03
716	84129	ACAD11	1.41E-03
717	5595	MAPK3	1.46E-03
718	5099	PCDH7	1.50E-03
719	5858	PZP	1.50E-03
720	64757	1-Mar	1.50E-03
721	114902	C1QTNF5	1.49E-03
722	152926	PPM1K	1.49E-03
723	359948	IRF2BP2	1.49E-03
724	788	SLC25A20	1.59E-03
725	6291	SAA4	1.58E-03
726	6945	MLX	1.58E-03
727	7813	EVIS	1.58E-03
728	9033	PKD2L1	1.58E-03
729	9315	NREP	1.58E-03
730	9975	NRID2	1.57E-03
731	56896	DPYSL5	1.57E-03
732	27113	BBC3	1.63E-03
733	1384	CRAT	1.67E-03
734	10555	AGPAT2	1.67E-03
735	55717	WDR11	1.66E-03
736	64116	SLC39A8	1.66E-03
737	1956	EGFR	1.66E-03

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
738	6690	SPINK1	1.67E-03
739	682	BSG	1.73E-03
740	1607	DGKB	1.76E-03
741	4519	CYTB	1.75E-03
742	4714	NDUFB8	1.75E-03
743	117579	RLN3	1.75E-03
744	5291	PIK3CB	1.76E-03
745	1909	EDNRA	1.83E-03
746	3175	ONECUT1	1.85E-03
747	3795	KHK	1.84E-03
748	8435	SOAT2	1.84E-03
749	89866	SEC16B	1.84E-03
750	1742	DLG4	1.90E-03
751	2239	GPC4	1.94E-03
752	4038	LRP4	1.94E-03
753	4660	PPP1R12B	1.94E-03
754	5106	PCK2	1.93E-03
755	53630	BCO1	1.93E-03
756	3119	HLA-DQB1	2.00E-03
757	5594	MAPK1	2.01E-03
758	2018	EMX2	2.03E-03
759	4047	LSS	2.03E-03
760	11321	GPN1	2.03E-03
761	7471	WNT1	2.04E-03
762	467	ATF3	2.07E-03
763	3164	NR4A1	2.13E-03
764	169792	GLIS3	2.13E-03
765	2246	FGF1	2.18E-03
766	56937	PMEP1	2.24E-03
767	7054	TH	2.33E-03
768	2444	FRK	2.35E-03
769	8876	VNN1	2.34E-03
770	79047	KCTD15	2.34E-03
771	958	CD40	2.36E-03
772	5069	PAPPA	2.41E-03
773	10455	ECI2	2.45E-03
774	80315	CPEB4	2.45E-03
775	116985	ARAP1	2.44E-03
776	7494	XBP1	2.46E-03
777	8600	TNFSF11	2.48E-03
778	9229	DLGAP1	2.55E-03

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
779	10752	CHL1	2.55E-03
780	80142	PTGES2	2.55E-03
781	8877	SPHK1	2.64E-03
782	2013	EMP2	2.67E-03
783	2867	FFAR2	2.66E-03
784	64344	HIF3A	2.66E-03
785	120	ADD3	2.78E-03
786	3033	HADH	2.78E-03
787	27433	TOR2A	2.77E-03
788	114882	OSBPL8	2.77E-03
789	57379	AICDA	2.79E-03
790	5601	MAPK9	2.82E-03
791	522	ATP5PF	2.89E-03
792	10902	BRD8	2.88E-03
793	3880	KRT19	2.91E-03
794	1468	SLC25A10	3.01E-03
795	5799	PTPRN2	3.00E-03
796	10613	ERLIN1	3.00E-03
797	55867	SLC22A11	3.00E-03
798	7010	TEK	3.00E-03
799	6667	SP1	3.03E-03
800	26	AOC1	3.12E-03
801	4430	MYO1B	3.11E-03
802	10494	STK25	3.11E-03
803	22941	SHANK2	3.10E-03
804	27232	GNMT	3.10E-03
805	10631	POSTN	3.20E-03
806	84735	CNDP1	3.23E-03
807	6524	SLC5A2	3.36E-03
808	84959	UBASH3B	3.35E-03
809	51561	IL23A	3.37E-03
810	975	CD81	3.41E-03
811	1592	CYP26A1	3.48E-03
812	7915	ALDH5A1	3.47E-03
813	10948	STARD3	3.61E-03
814	2331	FMOD	3.75E-03
815	6289	SAA2	3.74E-03
816	356	FASLG	3.75E-03
817	6777	STAT5B	3.82E-03
818	9804	TOMM20	3.87E-03
819	3002	GZMB	3.90E-03

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
820	4851	NOTCH1	3.96E-03
821	4221	MEN1	3.97E-03
822	9420	CYP7B1	4.00E-03
823	26119	LDLRAP1	4.00E-03
824	3725	JUN	4.00E-03
825	54106	TLR9	4.05E-03
826	39	ACAT2	4.13E-03
827	219	ALDH1B1	4.13E-03
828	229	ALDOB	4.12E-03
829	11343	MGLL	4.12E-03
830	93974	ATPSIF1	4.11E-03
831	132789	GNPDA2	4.11E-03
832	257194	NEGR1	4.10E-03
833	5617	PRL	4.13E-03
834	7042	TGFB2	4.17E-03
835	9948	WDR1	4.24E-03
836	781	CACNA2D1	4.39E-03
837	1431	CS	4.38E-03
838	57818	G6PC2	4.38E-03
839	3659	IRF1	4.42E-03
840	1437	CSF2	4.50E-03
841	1536	CYBB	4.50E-03
842	10	NAT2	4.50E-03
843	6522	SLC4A2	4.50E-03
844	1244	ABCC2	4.58E-03
845	51284	TLR7	4.57E-03
846	1825	DSC3	4.64E-03
847	5126	PCSK2	4.64E-03
848	22930	RAB3GAP1	4.63E-03
849	83667	SESN2	4.63E-03
850	181	AGRP	4.78E-03
851	54659	UGT1A3	4.77E-03
852	9365	KL	4.86E-03
853	9817	KEAP1	4.90E-03
854	2673	GFPT1	4.92E-03
855	2864	FFAR1	4.91E-03
856	6646	SOAT1	4.91E-03
857	23452	ANGPTL2	4.90E-03
858	6387	CXCL12	5.00E-03
859	1879	EBF1	5.05E-03
860	10645	CAMKK2	5.04E-03

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
861	64170	CARD9	5.04E-03
862	4057	LTF	5.05E-03
863	8648	NCOA1	5.14E-03
864	3745	KCNB1	5.18E-03
865	8824	CES2	5.18E-03
866	3458	IFNG	5.28E-03
867	2195	FAT1	5.33E-03
868	5550	PREP	5.32E-03
869	5155	PDGFB	5.36E-03
870	783	CACNB2	5.48E-03
871	2691	GHRH	5.64E-03
872	22900	CARD8	5.63E-03
873	1740	DLG2	5.80E-03
874	208	AKT2	5.80E-03
875	22914	KLRK1	5.90E-03
876	2658	GDF2	5.95E-03
877	3075	CFH	5.98E-03
878	2530	FUT8	6.11E-03
879	54576	UGT1A8	6.11E-03
880	4803	NGF	6.14E-03
881	128	ADH5	6.27E-03
882	968	CD68	6.26E-03
883	2182	ACSL4	6.25E-03
884	9622	KLK4	6.25E-03
885	23564	DDAH2	6.24E-03
886	5581	PRKCE	6.37E-03
887	29126	CD274	6.40E-03
888	7024	TFCP2	6.40E-03
889	9516	LITAF	6.39E-03
890	5290	PIK3CA	6.40E-03
891	7474	WNT5A	6.45E-03
892	3026	HABP2	6.55E-03
893	4886	NPY1R	6.54E-03
894	101928436	LOC101928436	6.54E-03
895	8202	NCOA3	6.71E-03
896	7037	TFRC	6.82E-03
897	1382	CRABP2	6.88E-03
898	54575	UGT1A10	7.06E-03
899	2997	GYS1	7.24E-03
900	4299	AFF1	7.23E-03
901	5586	PKN2	7.22E-03

Supplementary Table 1. Continued

Rank	GeneID	Symbol	False discovery rate
902	54657	UGT1A4	7.40E-03
903	250	ALPP	7.59E-03
904	2203	FBP1	7.58E-03
905	7942	TFEB	7.76E-03
906	5740	PTGIS	7.95E-03
907	1942	EFNA1	8.14E-03
908	8013	NR4A3	8.13E-03
909	8029	CUBN	8.12E-03
910	9572	NR1D1	8.11E-03
911	1376	CPT2	8.31E-03
912	5125	PCSK5	8.30E-03
913	2692	GHRHR	8.49E-03
914	7227	TRPS1	8.48E-03
915	117159	DCD	8.47E-03
916	2305	FOXM1	8.61E-03
917	1301	COL11A1	8.66E-03
918	8682	PEA15	8.65E-03
919	8761	PABPC4	8.64E-03
920	8840	WISP1	8.63E-03
921	9231	DLG5	8.82E-03
922	950	SCARB2	9.02E-03
923	6876	TAGLN	9.01E-03
924	9308	CD83	9.00E-03
925	64478	CSMD1	8.99E-03
926	54	ACP5	9.19E-03
927	1314	COPA	9.18E-03
928	4296	MAP3K11	9.17E-03
929	5174	PDZK1	9.16E-03
930	5916	RARG	9.15E-03
931	5300	PIN1	9.29E-03
932	2671	GFER	9.34E-03
933	4056	LTC4S	9.33E-03
934	4360	MRC1	9.32E-03
935	5315	PKM	9.47E-03
936	1373	CPS1	9.72E-03
937	7177	TPSAB1	9.71E-03
938	2898	GRIK2	9.92E-03