

**Supplementary Table 2: Genotype models of all 72 gene variants with BMI z-scores of 6 year old European children from the Children of SCOPE cohort.**

Model	CHR	Gene	SNP	Genotype	Frequency	Effect ( $\beta$ ) (95% CI)	<i>p</i> -value	Genotypic <i>p</i> value	Genotypic <i>q</i> value
Genotypic	17	HOXB5	rs9299	A/A	379	-	-	0.0166	0.6534
				A/G	435	-0.00967[-0.132~0.113]	0.8772		
				G/G	119	-0.255[-0.439~-0.0719]	0.0064		
Genotypic	16	SH2B1	rs7498665	A/A	359	-	-	0.0204	0.6534
				A/G	484	0.129[0.00719~0.250]	0.0379		
				G/G	97	0.252[0.0524~0.452]	0.0134		
Genotypic	18	NPC1	rs1805081	A/A	305	-	-	0.0359	0.6534
				A/G	463	-0.170[-0.299~-0.0408]	0.0099		
				G/G	166	-0.0981[-0.267~-0.0705]	0.2537		
Genotypic	8	MSRA	rs545854	G/G	639	-	-	0.0363	0.6534
				G/C	267	0.166[0.0388~0.294]	0.0106		
				C/C	29	0.102[-0.230~0.434]	0.5464		
Genotypic	2	INSIG2	rs7566605	G/G	424	-	-	0.0501	0.6780
				G/C	405	0.130[0.00844~0.251]	0.0361		
				C/C	106	-0.0527[-0.242~0.137]	0.5855		
Genotypic	11	UCP2	rs659366	C/C	382	-	-	0.0565	0.6780
				C/T	432	0.0929[-0.0297~0.216]	0.1372		
				T/T	120	-0.115[-0.297~0.0680]	0.2184		
Genotypic	7	NYP	rs17149106	G/G	877	-	-	0.1036	0.7193
				G/T	62	0.191[-0.0391~0.421]	0.1036		
				T/T	0	-	-		

Genotypic	16	FTO	rs9939609	T/T T/A A/A	356 441 137	- 0.0628[-0.0621~0.188] 0.184[0.00749~0.360]	- 0.3237 0.0410	0.1214	0.7193
Genotypic	18	MC4R	rs17782313	T/T T/C C/C	566 320 49	- 0.116[-0.00604~0.239] 0.154[-0.106~0.415]	- 0.0624 0.2453	0.1219	0.7193
Genotypic	2	TMEM18	rs6548238	C/C C/T T/T	669 240 26	- -0.118[-0.250~0.0135] -0.206[-0.556~0.145]	- 0.0785 0.2495	0.1314	0.7193
Genotypic	11	KCNJ11	rs5219	C/C C/T T/T	387 441 104	- 0.106[-0.0164~0.228] -0.0304[-0.224~0.163]	- 0.0896 0.7579	0.1532	0.7193
Genotypic	17	NR1D1	rs2071427	G/G G/A A/A	513 348 74	- 0.0831[-0.0384~0.205] -0.117[-0.334~0.101]	- 0.1799 0.2935	0.1552	0.7193
Genotypic	7	NYP	rs16139	A/A A/G G/G	869 62 1	- 0.218[-0.0121~0.448] 0.0905[-1.66~1.84]	- 0.0633 0.9192	0.1775	0.7193
Genotypic	3	ADIOPQ	rs1501299	C/C C/A A/A	526 341 66	- -0.0228[-0.145~0.0990] 0.196[-0.0328~0.425]	- 0.7135 0.0932	0.1864	0.7193
Genotypic	17	SREBF-1	rs2297508	C/C C/G G/G	404 406 120	- -0.0997[-0.223~0.0234] 0.0283[-0.154~0.210]	- 0.1123 0.7602	0.1897	0.7193

Genotypic	3	ADIOPQ	rs266729	C/C C/G G/G	502 367 70	- -0.103[-0.223~0.0178] 0.0381[-0.185~-0.262]	- 0.0948 0.7380	0.1893	0.7193
Genotypic	1	SEC16B	rs10913469	T/T T/C C/C	594 311 33	- -0.000785[-0.123~-0.122] 0.281[-0.0329~-0.594]	- 0.9900 0.0793	0.2078	0.7193
Genotypic	12	TIMELESS	rs4630333	G/G G/A A/A	378 325 81	- -0.111[-0.244~-0.0226] 0.0183[-0.197~-0.234]	- 0.1036 0.8676	0.2138	0.7193
Genotypic	5	ADRB2	rs1042713	G/G G/A A/A	356 348 233	- -0.0728[-0.205~-0.0592] 0.0564[-0.0911~-0.204]	- 0.2794 0.4531	0.2182	0.7193
Genotypic	2	POMC	rs1009388	C/C C/G G/G	463 373 98	- -0.00756[-0.129~-0.114] 0.162[-0.0325~-0.357]	- 0.9031 0.1023	0.2196	0.7193
Genotypic	12	FAIM2	rs7138803	G/G G/A A/A	382 429 121	- 0.0615[-0.0620~-0.185] 0.156[-0.0267~-0.185]	- 0.3289 0.0941	0.2266	0.7193
Genotypic	3	ADAMT-S9	rs4607103	C/C C/T T/T	520 362 48	- -0.0113[-0.131~-0.109] -0.231[-0.495~-0.0334]	- 0.8537 0.0868	0.2284	0.7193
Genotypic	2	ADCY3	rs753529	A/A A/G G/G	310 460 168	- -0.111[-0.240~-0.0179] -0.0516[-0.220~-0.116]	- 0.0914 0.5464	0.2361	0.7193

Genotypic	16	FTO	rs1421085	T/T T/C C/C	347 445 141	- 0.0661[-0.0595~0.192] 0.146[-0.0294~0.321]	- 0.3020 0.1027	0.2427	0.7193
Genotypic	2	NPAS2	rs1811399	T/T T/G G/G	540 337 58	- 0.0691[-0.0526~0.191] -0.122[-0.365~0.120]	- 0.2652 0.3216	0.2526	0.7193
Genotypic	1	TNNI3K	rs1514175	C/C C/T T/T	327 432 173	- -0.0457[-0.174~0.0828] 0.0850[-0.798~0.250]	- 0.4850 0.3117	0.2644	0.7193
Genotypic	5	ROBO1	rs1455832	T/T T/C C/C	482 369 74	- 0.0880[-0.0327~0.209] 0.115[-0.103~0.333]	- 0.1528 0.3016	0.2796	0.7193
Genotypic	17	PEMT	rs936108	A/A A/G G/G	270 482 185	- 0.0221[-0.111~0.155] 0.128[-0.0394~0.295]	- 0.7442 0.1341	0.2857	0.7193
Genotypic	6	TFAP2B	rs987237	A/A A/G G/G	637 279 24	- 0.0971[-0.0286~0.223] -0.0459[-0.410~0.318]	- 0.1298 0.8046	0.2919	0.7193
Genotypic	3	FASN	rs426444	T/T T/A A/A	429 396 108	- -0.0701[-0.192~0.0520] 0.0641[-0.125~0.253]	- 0.2604 0.5049	0.2997	0.7193
Genotypic	3	PPAR $\gamma$	rs1801282	C/C C/G G/G	725 191 18	- -0.0985[-0.241~0.0440] 0.0990[-0.319~0.517]	- 0.1753 0.6423	0.3406	0.7875

Genotypic	11	ARNTL	rs3816358	G/G G/T T/T	740 184 12	- 0.0216[-0.123~0.166] 0.446[-0.178~1.07]	- 0.7697 0.1609	0.3645	0.7875
Genotypic	1	NEGR1	rs2815752	T/T T/C C/C	370 438 128	- -0.0185[-0.143~0.105] -0.126[-0.306~0.0533]	- 0.7696 0.1677	0.3750	0.7875
Genotypic	11	ARNTL	rs11022775	C/C C/T T/T	796 135 2	- -0.0972[-0.260~0.0660] 0.472[-0.769~1.71]	- 0.2427 0.4559	0.3763	0.7875
Genotypic	3	ETV5	rs7647305	C/C C/T T/T	532 345 53	- -0.0217[-0.142~0.0991] 0.160[-0.0913~0.412]	- 0.7249 0.2114	0.3828	0.7875
Genotypic	10	PFKP	rs6602024	G/G G/A A/A	767 160 13	- -0.00768[-0.160~0.144] 0.338[-0.152~0.827]	- 0.9211 0.1762	0.3945	0.7890
Genotypic	4	CLOCK	rs1801260	T/T T/C C/C	516 348 74	- 0.0509[-0.0708~0.173] -0.0936[-0.312~0.124]	- 0.4119 0.3997	0.4100	0.7911
Genotypic	4	GNPAD2	rs10938397	A/A A/G G/G	282 458 195	- 0.0463[-0.0863~0.179] 0.110[-0.0533~0.273]	- 0.4933 0.1865	0.4176	0.7911
Genotypic	2	MCM6	rs4988235	T/T T/C C/C	476 381 80	- -0.00220[-0.123~0.118] 0.135[-0.0768~0.347]	- 0.9715 0.2114	0.4285	0.7911

Genotypic	11	ARNTL1	rs969485	A/A A/G G/G	469 358 92	- 0.0707[-0.0509~0.192] 0.0860[-0.112~-0.284]	- 0.2545 0.3933	0.4438	0.7988
Genotypic	12	HOXC10	rs7302703	G/G G/A A/A	623 291 21	- 0.00178[-0.123~-0.126] 0.245[-0.144~-0.633]	- 0.9776 0.2168	0.4640	0.8148
Genotypic	2	POMC	rs1042571	C/C C/T T/T	591 301 41	- 0.0106[-0.114~-0.135] 0.168[-0.115~-0.451]	- 0.8676 0.2442	0.5074	0.8698
Genotypic	13	OLFM4	rs9568856	G/G G/A A/A	708 214 10	- 0.0736[-0.0631~-0.210] -0.0222[-0.580~-0.536]	- 0.2907 0.9377	0.5667	0.9029
Genotypic	4	CLOCK	rs4864548	G/G G/A A/A	367 401 157	- -0.0397[-0.167~-0.0872] -0.0868[-0.254~-0.0808]	- 0.5391 0.3097	0.5811	0.9029
Genotypic	1	FAAH	rs324420	C/C C/A A/A	590 301 41	- -0.0654[-0.190~-0.0589] -0.00266[-0.286~-0.281]	- 0.3022 0.9853	0.5818	0.9029
Genotypic	5	PCSK1	rs6235	G/G G/C C/C	506 354 76	- -0.0441[-0.165~-0.0771] 0.0620[-0.153~-0.277]	- 0.4755 0.5725	0.5850	0.9029
Genotypic	16	AGRP	rs5030980	G/G G/A A/A	861 71 3	- -0.00496[-0.222~-0.212] -0.517[-1.53~-0.498]	- 0.9641 0.3178	0.6068	0.9029

Genotypic	2	NPAS2	rs11123857	A/A A/G G/G	511 362 61	- -0.0576[-0.178~-0.0627] -0.0617[-0.299~-0.176]	- 0.3475 0.6103	0.6112	0.9029
Genotypic	11	BDNF	rs6265	G/G G/A A/A	618 286 35	- 0.0306[-0.0949~-0.156] -0.122[-0.426~-0.183]	- 0.6328 0.4340	0.6206	0.9029
Genotypic	6	IGF2R	rs8191754	C/C C/G G/G	697 220 19	- -0.0536[-0.189~-0.0821] -0.132[-0.540~-0.275]	- 0.4384 0.5242	0.6270	0.9029
Genotypic	11	LRP5	rs634008	T/T T/C C/C	279 452 205	- -0.0295[-0.163~-0.104] -0.0751[-0.237~-0.0864]	- 0.6652 0.3615	0.6588	0.9177
Genotypic	1	LEPR	rs1137101	A/A A/G G/G	267 455 212	- -0.00820[-0.143~-0.127] -0.0661[-0.227~-0.0950]	- 0.9051 0.4210	0.6778	0.9177
Genotypic	16	MMP2	rs243865	C/C C/T T/T	496 375 67	- 0.0313[-0.0887~-0.151] -0.0662[-0.294~-0.162]	- 0.6092 0.5695	0.6854	0.9177
Genotypic	6	ENNP1/PC-1	rs1044498	A/A A/C C/C	689 228 20	- 0.0476[-0.0865~-0.182] 0.115[-0.283~-0.513]	- 0.4863 0.5698	0.6883	0.9177
Genotypic	16	GPRC5B	rs12444979	C/C C/T T/T	692 217 26	- -0.0579[-0.194~-0.0786] -0.0355[-0.386~-0.315]	- 0.4053 0.8424	0.7019	0.9189

Genotypic	11	IGF2	rs3741205	T/T T/G G/G	517 353 52	- -0.0249[-0.146~-0.0964] -0.101[-0.357~-0.155]	- 0.6866 0.4381	0.7158	0.9203
Genotypic	1	LEPR	rs1045895	G/G G/A A/A	364 432 140	- -0.0160[-0.141~-0.109] 0.0513[-0.123~-0.226]	- 0.8018 0.5642	0.7415	0.9366
Genotypic	13	MTIF3	rs4771122	A/A A/G G/G	570 323 38	- -0.00916[-0.131~-0.113] -0.109[-0.402~-0.185]	- 0.8828 0.4677	0.7675	0.9384
Genotypic	3	PPAR $\gamma$	rs3856806	C/C C/T T/T	704 216 17	- -0.0106[-0.147~-0.126] 0.148[-0.282~-0.578]	- 0.8781 0.4987	0.7789	0.9384
Genotypic	3	TMCC1	rs2811337	C/C C/G G/G	653 252 27	- 0.0454[-0.0848~-0.175] -0.0144[-0.359~-0.330]	- 0.4941 0.9348	0.7820	0.9384
Genotypic	12	ITPR2	rs1049376	A/A A/G G/G	504 360 68	- 0.0223[-0.0984~-0.143] 0.0706[-0.155~-0.297]	- 0.7169 0.5398	0.8066	0.9521
Genotypic	19	KCTD15	rs29941	C/C C/T T/T	433 395 105	- -0.0223[-0.144~-0.0998] 0.0352[-0.156~-0.226]	- 0.7197 0.7175	0.8295	0.9633
Genotypic	8	FABP4	rs1054135	G/G G/A A/A	745 174 14	- 0.00143[-0.147~-0.149] 0.140[-0.333~-0.615]	- 0.9848 0.5604	0.8439	0.9645



Genotypic	17	SPACA3/SPRASA	rs16967845	G/G G/A A/A	891 45 0	- -0.0239[-0.292~0.244] -	- 0.8608 -	0.8608	0.9684
Genotypic	6	RSPO3	rs11154383	A/A A/G G/G	458 385 91	- 0.0311[-0.0904~0.153] 0.0247[-0.177~0.226]	- 0.6158 0.8100	0.8766	0.9710
Genotypic	17	STAT3	rs8069645	A/A A/G G/G	498 372 60	- 0.00288[-0.118~0.123] 0.0561[-0.184~0.296]	- 0.9625 0.6466	0.8989	0.9806
Genotypic	3	GHRELIN	rs696217	G/G G/T T/T	789 135 10	- -0.0168[-0.180~0.146] -0.108[-0.666~0.449]	- 0.8402 0.7026	0.9138	0.9820
Genotypic	5	TSLP	rs3806933	C/C C/T T/T	288 478 168	- -0.00539[-0.136~0.126] -0.0308[-0.201~0.140]	- 0.9357 0.7227	0.9341	0.9831
Genotypic	2	NPAS2	rs2305160	C/C C/T T/T	412 400 109	- -0.0218[-0.145~0.102] -0.00927[-0.200~0.181]	- 0.7300 0.9237	0.9421	0.9831
Genotypic	3	CCNL1/LEKR1	rs900400	T/T T/C C/C	333 457 131	- -0.00504[-0.131~0.121] -0.0236[-0.204~0.157]	- 0.9376 0.7978	0.9673	0.9898
Genotypic	15	MAP2K5	rs2241423	G/G G/A A/A	524 361 50	- -0.00867[-0.129~0.111] 0.00310[-0.257~0.263]	- 0.8874 0.9814	0.9887	0.9898

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Genotypic	3	ADCY5	rs9883204	C/C	517	-	-	0.9898	0.9898
				C/T	347	0.00166[-0.120~0.123]	0.9786		
				T/T	61	-0.0160[-0.253~-0.2221]	0.8949		

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