ESM Table 2 Weights applied to construct genetic risk scores

SNP	Nearby Genes	R/A	DIAGRAMv3 (Europeans: up to 12,171 cases and 56,862 controls)	AGEN-T2D (East Asians: up to 25,079 cases and 29,611 controls)	MetaboChip (Europeans: up to 34,840 cases and 114,981 controls)	TransEthnic (Europeans: 12,171 cases and 56,862 controls; East Asians: 6,952 cases and 11,865 controls; South Asians: 5,561 cases and 14,458 controls; Mexicans and Mexican Americans: 1,804 cases and 779 controls)	TransEthnic+CKB (Europeans: 12,171 cases and 56,862 controls; East Asians: **14,061 cases and 97,887 controls**; South Asians: 5,561 cases and 14,458 controls; Mexicans and Mexican Americans: 1,804 cases and 779 controls)	Classificantion
rs340874	PROX1	C/T	0.077	0.077	0.064	0.068	0.059	Beta Cell Function
rs7578597	THADA	T/C	0.131	-0.073	0.127	0.068	0.073	Beta Cell Function
rs11708067	ADCY5	A/G	0.095	0.166	0.107	0.095	0.103	Beta Cell Function
rs1470579	IGF2BP2	C/A	0.113	0.140	0.120	0.122	0.117	Beta Cell Function
rs16861329	ST64GAL1	C/T	0.030	-0.083	**0.03**[c]	0.086	0.067	Beta Cell Function
rs6815464	MAEA	C/G	0.14[a]	0.122	0.071 [b]	0.095	0.080	Beta Cell Function
rs7754840	CDKAL1	C/G	0.140	0.166	0.126	0.140	0.159	Beta Cell Function
rs2191349	DGKB	T/G	0.068	0.115	0.050	0.086	0.073	Beta Cell Function
rs4607517	GCK	A/G	0.049	0.030	0.073	0.030	0.026	Beta Cell Function
rs6467136	GCC1-PAX4	G/A	-0.010	0.104	**-0.01**[c]	0.020	0.021	Beta Cell Function
rs13266634	SLC30A8	C/T	0.148	0.100	0.126	0.131	0.116	Beta Cell Function
rs7041847	GLIS3	A/G	0.049	0.095	0.041	0.058	0.057	Beta Cell Function
rs10811661	CDKN2A/B	T/C	0.166	0.109	0.169	0.191	0.194	Beta Cell Function
rs1111875	HHEX/IDE	C/T	0.140	0.081	0.105	0.113	0.111	Beta Cell Function
rs7901695	TCF7L2	C/T	0.315	0.166	0.296	0.270	0.274	Beta Cell Function
rs2237892	KCNQ1	C/T	0.113	0.175	0.147	0.182	0.208	Beta Cell Function
rs5215	KCNJ11	C/T	0.077	0.095	0.072	0.086	0.079	Beta Cell Function
rs1552224	ARAP1	A/C	0.122	0.148	0.102	0.095	0.095	Beta Cell Function
rs10830963	MTNR1B	G/C	0.104	0.000	0.096	0.086	0.054	Beta Cell Function
rs1359790	SPRY2	G/A	0.095	0.052	0.074	0.068	0.065	Beta Cell Function
rs7172432	VPS13C	A/G	0.058	0.101	**0.058**[c]	0.068	0.066	Beta Cell Function
rs2028299	AP3S2	C/A	0.039	0.077	**0.039**	0.068	0.065	Beta Cell Function
rs8042680	PRC1	A/C	0.068	0.495	0.065	0.068	0.062	Beta Cell Function
rs4430796	HNF1B	G/A	0.122	0.113	0.093	0.095	0.095	Beta Cell Function
rs6017317	HNF4A	G/T	0.058	0.086	**0.058**[c]	0.068	0.059	Beta Cell Function
rs780094	GCKR	C/T	0.039	0.058	0.060	0.058	0.066	Insulin Resistance
rs3923113	GRB14	A/C	0.039	0.030	0.070	0.077	0.051	Insulin Resistance
rs2943641	IRS1	C/T	0.077	0.113	0.089	0.086	0.081	Insulin Resistance
rs1801282	PPARG	C/G	0.148	0.140	0.123	0.131	0.115	Insulin Resistance
rs972283	KLF14	G/A	0.095	-0.010	0.041	0.049	0.045	Insulin Resistance
rs1531343	HMGA2	C/G	0.140	0.058	0.118	0.095	0.081	Insulin Resistance
rs831571	PSMD6	C/T	0.030	0.090	**0.03**[c]	0.049	0.052	Insulin Resistance
rs10923931	NOTCH2	T/G	0.095	0.000	0.079	0.049	0.062	Unclassified
rs243021	BCL11A	A/G	0.086	0.049	0.065	0.068	0.068	Unclassified
rs6780569	UBE2E2	G/A	0.086	0.156	**0.086**[c]	0.095	0.102	Unclassified
rs4607103	ADAMTS9	C/T	0.077	-0.010	0.074	0.039	0.025	Unclassified
rs4457053	ZBED3	G/A	0.122	0.000	0.089	0.095	0.094	Unclassified
rs9470794	ZFAND3	C/T	-0.010	0.113	**-0.01**[c]	0.058	0.036	Unclassified
rs864745	JAZF1	T/C	0.113	0.058	0.095	0.095	0.080	Unclassified
rs896854	TP53INP1	T/C	0.086	0.068	0.050	0.077	0.063	Unclassified
rs17584499	PTPRD	T/C	0.000	0.086	**0.000**[c]	0.010	0.007	Unclassified
rs13292136	TLE4/CHCHD9	C/T	0.174	-0.010	**0.174**	0.104	0.098	Unclassified
rs10906115	CDC123	A/G	0.058	0.082	0.033	0.068	0.073	Unclassified
rs1802295	VPS26A	T/G	0.020	0.010	0.003	0.049	0.043	Unclassified
rs10886471	GRK5	C/T	-0.010	0.058	**-0.01**[c]	0.010	0.008	Unclassified
rs7961581	TSPAN8/LGR5	C/T	0.077	0.010	**0.077**	0.058	0.050	Unclassified
rs7403531	RASGRP1	T/C	0.020	0.077	**0.02**[c]	0.020	0.024	Unclassified
rs7178572	HMG20A	G/A	0.077	0.086	0.072	0.086	0.080	Unclassified
rs11634397	ZFAND6	G/A	0.086	0.000	0.047	0.068	0.060	Unclassified
rs9939609	FTO	A/T	0.104	0.119	0.113	0.095	0.105	Unclassified
rs4523957	SRR	T/G	0.000	0.030	**0.00**[c]	0.020	0.005	Unclassified
rs12970134	MC4R	A/G	0.077	0.070	0.075	0.077	0.072	Unclassified

Proxies [a] rs11247991 (r^2=1 with rs6815464 in CHB),[b] rs6819243 (r^2=0.966 withrs6815464 in CHB)

Weights were calculated as natural-log(Odds Ratio)

Each variant's corresponding derived from:

DIAGRAM: DIAGRAMv3 GWAS meta-analysis

MetaboChip:DIAGRAM Metabochip meta-analysis. [c] Effects of variants not included in metabochip were obtained from DIAGRAMv3 and highlighted in bold

AGEN-T2D: largest T2D-GWAS meta-analysis in East Asian, Asian Genetic Epidemiology Network-Type 2 Diabetes Consortium

TransEthnic: Trans-ethnic Meta analysis of four ethinic groups (East Asians[AGEN-T2D], Europeans [DIAGRAM], South Asians [SAT2D], and Mexicans [MAT2D])

TransEthnic+CKB: Meta-analysis of CKB and Trans-ethnic GWAS (East Asians[AGEN-T2D and CKB], Europeans [DIAGRAM], South Asians [SAT2D], and Mexicans [MAT2D])