

## Electronic supplementary material

**ESM Table 3** Association of individual SNPs and genetic predisposition score with type 2 diabetes (including prevalent and incident cases)

SNP	Nearest gene	Effect size on BMI ( $\text{kg}/\text{m}^2$ )		Observed association with type 2 diabetes		Expected association with type 2 diabetes <sup>b</sup>	<i>p</i> for difference between expected and observed	Observed association with type 2 diabetes adjusted for BMI	
		$\beta^a$ (95% CI)	<i>p</i> value	OR (95% CI)	<i>p</i> value			OR (95% CI)	<i>p</i> value
rs3101336	<i>NEGR1</i>	0.084 (0.010–0.159)	0.027	1.009 (0.927–1.100)	0.830	1.014 (1.001–1.026)	0.925	0.988 (0.906–1.079)	0.791
rs10913469	<i>SEC16B</i>	0.155 (0.062–0.248)	$1.12 \times 10^{-3}$	0.972 (0.873–1.082)	0.604	1.026 (1.010–1.041)	0.332	0.943 (0.845–1.051)	0.288
rs6548238	<i>TMEM18</i>	0.248 (0.151–0.346)	$5.82 \times 10^{-7}$	1.096 (0.977–1.230)	0.117	1.041 (1.024–1.058)	0.380	1.058 (0.941–1.190)	0.346
rs7647305	<i>ETV5</i>	0.047 (−0.043, 0.138)	0.308	0.934 (0.843–1.034)	0.188	1.008 (0.993–1.022)	0.147	0.919 (0.828–1.019)	0.109
rs10938397	<i>GNPDA2</i>	0.169 (0.092–0.245)	$1.58 \times 10^{-5}$	1.078 (0.989–1.174)	0.088	1.028 (1.015–1.041)	0.282	1.050 (0.962–1.146)	0.278
rs925946	<i>BDNF</i>	0.228 (0.146–0.311)	$5.78 \times 10^{-8}$	1.042 (0.948–1.145)	0.395	1.037 (1.023–1.051)	0.922	1.001 (0.909–1.103)	0.977
rs10838738	<i>MTCH2</i>	0.069 (−0.011–0.148)	0.090	0.984 (0.899–1.076)	0.720	1.011 (0.998–1.024)	0.554	0.961 (0.877–1.053)	0.399
rs7132908	<i>FAIM2</i>	0.149 (0.073–0.225)	$1.22 \times 10^{-4}$	1.023 (0.938–1.115)	0.610	1.025 (1.012–1.038)	0.968	0.994 (0.910–1.086)	0.902
rs7498665	<i>SH2B1</i>	0.094 (0.019–0.168)	0.013	1.013 (0.931–1.103)	0.757	1.015 (1.003–1.027)	0.971	0.998 (0.915–1.087)	0.957
rs1121980	<i>FTO</i>	0.327 (0.252–0.402)	$1.31 \times 10^{-17}$	1.092 (1.004–1.189)	0.040	1.054 (1.040–1.068)	0.412	1.032 (0.947–1.125)	0.472
rs17782313	<i>MC4R</i>	0.182 (0.095–0.269)	$4.22 \times 10^{-5}$	1.055 (0.957–1.163)	0.279	1.029 (1.015–1.044)	0.621	1.014 (0.919–1.120)	0.781
rs368794	<i>KCTD15</i>	0.079 (0.000–0.158)	0.049	1.068 (0.976–1.170)	0.152	1.013 (1.000–1.026)	0.252	1.053 (0.960–1.155)	0.276
Genetic predisposition score		0.154 (0.130–0.178)	$9.11 \times 10^{-37}$	1.036 (1.008–1.065)	0.010	1.025 (1.021–1.030)	0.446	1.006 (0.978–1.034)	0.676

<sup>a</sup>Regression coefficient representing the effect per risk allele on BMI, adjusted for age and sex

<sup>b</sup>Expected association with type 2 diabetes was calculated based on the association of the individual SNPs or the score with BMI and the association of BMI with type 2 diabetes (including prevalent and incident cases)