

**Supplementary Table 16.** Combined effect of three risk alleles on micro- and macrovascular complications in T2DM patients

Model no.	SNPs in model (effect allele)	No. of effect allele (GRS)	DM without complication (n=577)	DM with complications (n=383)	P value <sup>a</sup>	OR (95% CI)	P value
1	<i>TCF7L2</i> rs7903146 (C)	2–3	116 (67.8)	55 (32.2)	0.010	1	0.031
	<i>KCNQ1</i> rs2237892 (C)	4	437 (59.4)	299 (40.6)		1.57 (1.04–2.35)	
	<i>KCNQ1</i> rs2237897 (T)	5–6	24 (45.3)	29 (54.7)		2.33 (1.13–4.79)	
2	<i>TCF7L2</i> rs7903146 (C)	1–3	93 (59.6)	63 (40.4)	0.678	1	0.633
	<i>TCF7L2</i> rs290487 (T)	4	199 (61.2)	126 (38.8)		1.11 (0.71–1.74)	
	<i>KCNQ1</i> rs2237892 (C)	5	206 (61.1)	131 (38.9)		1.04 (0.66–1.61)	
		6	79 (55.6)	63 (44.4)		1.24 (0.73–2.11)	
3	<i>TCF7L2</i> rs7903146 (C)	1–2	91 (60.7)	59 (39.3)	0.325	1	0.472
	<i>TCF7L2</i> rs290487 (T)	3	208 (63.2)	121 (36.8)		0.85 (0.54–1.33)	
	<i>KCNQ1</i> rs2237897 (T)	4	197 (59.3)	135 (40.7)		1.05 (0.67–1.64)	
		5–6	81 (54.4)	68 (45.6)		1.26 (0.75–2.12)	
4	<i>TCF7L2</i> rs290487 (T)	0–2	149 (60.1)	99 (39.9)	0.135	1	0.571
	<i>KCNQ1</i> rs2237892 (C)	3	266 (63.2)	155 (36.8)		0.90 (0.63–1.29)	
	<i>KCNQ1</i> rs2237897 (T)	4–6	162 (55.7)	129 (44.3)		1.19 (0.80–1.75)	

Values are presented as number (%).  $P \leq 0.05$  indicated statistical significance. DM with complications: micro- and/or macrovascular complications; microvascular complications: retinopathy, nephropathy, and neuropathy; macrovascular complications: coronary artery disease and stroke. OR adjusted for age, sex, hypertension, dyslipidemia, glycated hemoglobin, and body mass index.

T2DM, type 2 diabetes mellitus; SNP, single nucleotide polymorphism; GRS, genetic risk score; DM, diabetes mellitus; OR, odds ratio; CI, confidence interval; *TCF7L2*, transcription factor 7-like 2; *KCNQ1*, potassium voltage-gated channel subfamily Q member 1.

<sup>a</sup>P value after 100,000 permutations.