



SLC30A8 (ZnT8) variations and type 2 diabetes in the Chinese Han population

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ABSTRACT. In recent genome-wide association studies, variants in the SLC30A8 gene have been found to be associated with risk for type 2 diabetes. We examined a possible association of tag SNPs spanning SLC30A8 and their haplotypes with type 2 diabetes in the Chinese Han population. There were 1508 Chinese Han type 2 diabetes patients and 1500 age- and gender-matched control subjects; all were genotyped for three tagging SNPs (rs2466295, rs4876703, and rs11558471) of the human SLC30A8 gene. The AA genotype of rs11558471 was found significantly more frequently in type 2 diabetes patients than in controls (46 vs 24%). The frequency of the A-C-A haplotype was significantly higher in type 2 diabetes patients than in controls (0.331 vs 0.120). The frequency of the A-C-G haplotype was significantly lower in type 2 diabetes patients than in controls (0.160 vs 0.365). We conclude that type 2 diabetes is associated with the AA genotype of rs11558471 in the human SLC30A8 gene. The A-C-A haplotype appears to be a risk factor and the A-C-G haplotype may be a protective factor against type 2 diabetes in Chinese Han.

Key words: SLC30A8; Type 2 diabetes; Single-nucleotide polymorphism