

**Supplementary table 1.** Distribution of *P* values in the first screening

	Genotype	allele	dominant model	recessive model	overall
$P < 0.01$	631(0.8)	814(1.0)	661(0.8)	648(0.8)	1615(2.0)
$0.01 \leq P < 0.05$	2780(3.4)	3304(4.1)	2724(3.3)	2838(3.5)	6233(7.7)
$0.05 \leq P < 0.1$	3721(4.6)	4343(5.3)	4039(5.0)	4103(5.0)	7884(9.7)
$0.1 \leq P < 0.2$	7549(9.3)	8320(10.2)	8091(10.0)	8218(10.1)	13562(16.7)
$0.2 \leq P < 0.3$	8113(10.0)	8059(9.9)	6279(7.7)	6648(8.2)	9759(12.0)
$0.3 \leq P < 0.4$	8527(10.5)	8646(10.6)	10352(12.7)	10339(12.7)	13177(16.2)
$0.4 \leq P < 0.5$	7583(9.1)	7825(9.6)	6407(7.9)	6620(8.1)	7044(8.7)
$0.5 \leq P < 0.6$	9281(11.4)	8143(10.0)	7658(9.4)	7826(9.6)	7405(9.1)
$0.6 \leq P < 0.7$	7701(9.5)	8062(9.9)	6905(8.5)	7041(8.7)	5418(6.7)
$0.7 \leq P < 0.8$	7045(8.7)	7488(9.2)	7145(8.8)	7449(9.2)	4250(5.2)
$0.8 \leq P < 0.9$	8208(10.1)	7330(9.0)	6039(7.4)	6137(7.5)	2352(2.9)
$0.9 \leq P \leq 1$	10376(12.8)	8981(11.0)	15015(18.5)	13448(16.5)	2616(3.2)
total	81315	81315	81315	81315	81315

Data are presented as number of SNPs, Percent (%) of total is shown in parenthesis