

**S2 Table. The total running time of PEPIS for the epistatic effect analysis using the simulated data at various numbers of bins and individuals.**

**A: Fixing the numbers of individuals at 1,000 while varying the numbers of bins from 1,000 to 20,000.**

		Epistatic Effect Analysis Running Time (seconds)
Individual=1,000	Bin=1,000	701
	Bin=2,000	1,140
	Bin=4,000	1,949
	Bin=10,000	7,901
	Bin=20,000	28,356

**B: Fixing the numbers of bins at 1,000 while varying the numbers of individuals from 1,000 to 10,000.**

		Epistatic Effect Analysis Running Time (seconds)
Bin=1000	Individual=1,000	701
	Individual=2,000	4,399
	Individual=4,000	35,885
	Individual=10,000	506,552