

Setting	$I(A = 1) I(B = 1)$	$I(A = 1) I(B = 0)$	$I(A = 0) I(B = 1)$	$I(A = 0) I(B = 0)$	Association type
1	β_0	β_0	β_0	β_0	Independant
2	β_1	β_0	β_0	β_0	Epistasis
3	β_0	β_1	β_0	β_0	Epistasis
4	β_0	β_0	β_1	β_0	Epistasis
5	β_0	β_0	β_0	β_1	Epistasis
6	β_1	β_1	β_0	β_0	Single
7	β_1	β_0	β_1	β_0	Single
8	β_1	β_0	β_0	β_1	Epistasis
9	β_1	β_2	β_0	β_0	Epistasis
10	β_1	β_0	β_2	β_0	Epistasis
11	β_1	β_0	β_0	β_2	Epistasis
12	β_0	β_1	β_2	β_0	Epistasis
13	β_0	β_1	β_0	β_2	Epistasis
14	β_0	β_0	β_1	β_2	Epistasis
15	β_0	β_1	β_2	β_3	Epistasis

Table S1. Parameter settings.