

**Table S5 Expected (top half) and observed (bottom half) frequencies of blocks with a total numbers of mutations  $S$  for each of the four topology classes.** The expectation is derived assuming the model that provided the best fit to the 2kb (N/YRI/CEU) data (Table 2) and closely fits the observed frequencies.

$S$	0	1	2	3	4	5	6	7	8	Total
(N,(YRI,CEU))	n/a	0.046	0.043	0.024	0.0099	0.0036	0.0012	0.00039	0.00012	0.13
(YRI,(N,CEU))	n/a	0.012	0.013	0.0083	0.0040	0.0016	0.00058	0.00019	0.000062	0.039
(CEU,(N,YRI))	n/a	0.0085	0.011	0.0071	0.0035	0.0014	0.00053	0.00018	0.000058	0.032
Unresolved	0.36	0.28	0.12	0.037	0.0099	0.0023	0.00050	0.00010	0.000020	0.80
(N,(YRI,CEU))	n/a	0.052	0.046	0.023	0.0097	0.0037	0.0013	0.00039	0.00014	0.14
(YRI,(N,CEU))	n/a	0.015	0.015	0.0084	0.0038	0.0016	0.00059	0.00018	0.000052	0.045
(CEU,(N,YRI))	n/a	0.013	0.013	0.0078	0.0036	0.0013	0.00054	0.00020	0.000045	0.040
Unresolved	0.36	0.26	0.11	0.036	0.011	0.0027	0.00078	0.00024	0.000063	0.78

Note that 80% of blocks are topologically unresolved.