

Site1_id	Site2_id	Sample	Coverage	Site1_muts	Site2_muts	Both_muts	Exp_muts	Site1_perc	Site2_perc	Both_perc	chisquare	prob	fdr	direction
319	323	a1	5600	33	63	1	0.37	0.59	1.13	0.02	0.05	0.8312	0.8908	MORE
319	323	a2	5223	16	47	1	0.14	0.31	0.90	0.02	0.89	0.3452	0.4981	MORE
319	323	a3	4022	17	42	0	0.18	0.42	1.04	0.00	0.59	0.4407	0.5846	FEWER
319	323	a4	6139	22	60	1	0.22	0.36	0.98	0.02	0.38	0.5361	0.6661	MORE
319	323	b1	8313	141	104	11	1.76	1.70	1.25	0.13	44.57	0.0000	0.0000	MORE
319	323	b3	8363	224	296	8	7.93	2.68	3.54	0.10	0.02	0.8753	0.9171	MORE
319	323	b4	6863	218	440	9	13.98	3.18	6.41	0.13	1.58	0.2084	0.3220	FEWER
319	323	c1	7432	138	60	1	1.11	1.86	0.81	0.01	0.14	0.7110	0.8043	FEWER
319	323	c3	6314	689	520	11	56.74	10.91	8.24	0.17	44.13	0.0000	0.0000	FEWER
319	323	c4	7045	848	724	9	87.15	12.04	10.28	0.13	87.66	0.0000	0.0000	FEWER
319	324	a1	5478	32	13	0	0.08	0.58	0.24	0.00	2.39	0.1223	0.2096	FEWER
319	324	a2	5074	15	23	0	0.07	0.30	0.45	0.00	2.77	0.0963	0.1741	FEWER
319	324	a3	3876	16	18	1	0.07	0.41	0.46	0.03	2.46	0.1167	0.2027	MORE
319	324	a4	5979	19	27	0	0.09	0.32	0.45	0.00	2.02	0.1557	0.2524	FEWER
319	324	b1	8143	128	40	0	0.63	1.57	0.49	0.00	0.03	0.8697	0.9171	FEWER
319	324	b3	8209	215	59	3	1.55	2.62	0.72	0.04	0.61	0.4347	0.5791	MORE
319	324	b4	6679	205	119	2	3.65	3.07	1.78	0.03	0.38	0.5365	0.6661	FEWER
319	324	c1	7236	116	57	7	0.91	1.60	0.79	0.10	34.98	0.0000	0.0000	MORE
319	324	c3	6146	668	275	2	29.89	10.87	4.47	0.03	29.48	0.0000	0.0000	FEWER
319	324	c4	6830	815	348	5	41.53	11.93	5.10	0.07	37.39	0.0000	0.0000	FEWER
319	345	a1	1714	6	12	1	0.04	0.35	0.70	0.06	5.05	0.0247	0.0534	MORE
319	345	a2	1659	1	14	0	0.01	0.06	0.84	0.00	28.89	0.0000	0.0000	FEWER
319	345	a3	1250	2	13	0	0.02	0.16	1.04	0.00	11.17	0.0008	0.0022	FEWER
319	345	a4	1837	3	10	1	0.02	0.16	0.54	0.05	14.43	0.0001	0.0004	MORE
319	345	b1	2566	2	24	0	0.02	0.08	0.94	0.00	12.51	0.0004	0.0011	FEWER
319	345	b3	2702	28	60	1	0.62	1.04	2.22	0.04	0.02	0.8753	0.9171	MORE
319	345	b4	2133	28	48	0	0.63	1.31	2.25	0.00	0.03	0.8675	0.9171	FEWER
319	345	c1	2332	8	15	0	0.05	0.34	0.64	0.00	3.95	0.0469	0.0937	FEWER
319	345	c3	1932	156	95	0	7.67	8.07	4.92	0.00	7.67	0.0056	0.0131	FEWER
319	345	c4	2146	167	90	0	7.00	7.78	4.19	0.00	6.84	0.0089	0.0206	FEWER
323	324	a1	6208	54	18	1	0.16	0.87	0.29	0.02	0.76	0.3827	0.5363	MORE
323	324	a2	5860	49	28	2	0.23	0.84	0.48	0.03	6.94	0.0085	0.0196	MORE
323	324	a3	4545	47	21	0	0.22	1.03	0.46	0.00	0.37	0.5409	0.6664	FEWER
323	324	a4	6816	66	34	2	0.33	0.97	0.50	0.03	4.23	0.0398	0.0819	MORE
323	324	b1	9244	65	50	3	0.35	0.70	0.54	0.03	13.29	0.0003	0.0007	MORE
323	324	b3	9345	277	82	3	2.43	2.96	0.88	0.03	0.00	0.9638	0.9736	MORE
323	324	b4	7727	475	136	1	8.36	6.15	1.76	0.01	6.11	0.0135	0.0302	FEWER
323	324	c1	8371	58	78	2	0.54	0.69	0.93	0.02	1.73	0.1882	0.2955	MORE
323	324	c3	7124	582	323	4	26.39	8.17	4.53	0.06	20.71	0.0000	0.0000	FEWER
323	324	c4	7903	776	402	5	39.47	9.82	5.09	0.06	34.16	0.0000	0.0000	FEWER
323	345	a1	2444	7	16	0	0.05	0.29	0.65	0.00	4.54	0.0330	0.0688	FEWER
323	345	a2	2445	8	17	0	0.06	0.33	0.70	0.00	3.59	0.0582	0.1121	FEWER
323	345	a3	1919	13	14	0	0.09	0.68	0.73	0.00	1.76	0.1852	0.2929	FEWER
323	345	a4	2674	20	13	1	0.10	0.75	0.49	0.04	1.69	0.1937	0.3020	MORE
323	345	b1	3667	19	29	0	0.15	0.52	0.79	0.00	0.82	0.3638	0.5159	FEWER
323	345	b3	3838	95	76	2	1.88	2.48	1.98	0.05	0.08	0.7762	0.8484	MORE
323	345	b4	3181	170	67	4	3.58	5.34	2.11	0.13	0.00	0.9647	0.9736	MORE
323	345	c1	3467	21	20	2	0.12	0.61	0.58	0.06	15.88	0.0001	0.0002	MORE

323	345	c3	2910	240	146	2	12.04	8.25	5.02	0.07	8.68	0.0032	0.0078	FEWER
323	345	c4	3219	301	127	3	11.88	9.35	3.95	0.09	6.78	0.0092	0.0210	FEWER
324	345	a1	2604	10	17	0	0.07	0.38	0.65	0.00	2.92	0.0872	0.1603	FEWER
324	345	a2	2601	10	18	2	0.07	0.38	0.69	0.08	29.90	0.0000	0.0000	MORE
324	345	a3	2011	9	14	1	0.06	0.45	0.70	0.05	3.09	0.0789	0.1466	MORE
324	345	a4	2836	18	13	0	0.08	0.63	0.46	0.00	2.14	0.1439	0.2379	FEWER
324	345	b1	3908	40	30	2	0.31	1.02	0.77	0.05	4.72	0.0298	0.0637	MORE
324	345	b3	4079	49	80	1	0.96	1.20	1.96	0.02	0.23	0.6328	0.7516	MORE
324	345	b4	3371	67	75	0	1.49	1.99	2.22	0.00	0.69	0.4072	0.5581	FEWER
324	345	c1	3654	37	21	0	0.21	1.01	0.57	0.00	0.39	0.5299	0.6629	FEWER
324	345	c3	3094	158	149	3	7.61	5.11	4.82	0.10	2.46	0.1170	0.2027	FEWER
324	345	c4	3373	196	132	3	7.67	5.81	3.91	0.09	2.51	0.1135	0.1986	FEWER
562	570	a1	5526	17	94	1	0.29	0.31	1.70	0.02	0.16	0.6921	0.7961	MORE
562	570	a2	6055	26	85	2	0.36	0.43	1.40	0.03	3.60	0.0579	0.1121	MORE
562	570	a3	4902	14	41	1	0.12	0.29	0.84	0.02	1.27	0.2605	0.3967	MORE
562	570	a4	6197	32	126	6	0.65	0.52	2.03	0.10	37.09	0.0000	0.0000	MORE
562	570	b1	6412	122	421	23	8.01	1.90	6.57	0.36	28.60	0.0000	0.0000	MORE
562	570	b3	6000	60	290	11	2.90	1.00	4.83	0.18	21.14	0.0000	0.0000	MORE
562	570	b4	6330	89	258	17	3.63	1.41	4.08	0.27	48.30	0.0000	0.0000	MORE
562	570	c1	4710	85	271	9	4.89	1.80	5.75	0.19	2.88	0.0898	0.1636	MORE
562	570	c3	4909	98	232	12	4.63	2.00	4.73	0.24	10.91	0.0010	0.0025	MORE
562	570	c4	5626	60	220	11	2.35	1.07	3.91	0.20	29.81	0.0000	0.0000	MORE
624	645	a1	4543	30	136	0	0.90	0.66	2.99	0.00	0.18	0.6687	0.7774	FEWER
624	645	a2	7344	61	131	1	1.09	0.83	1.78	0.01	0.16	0.6891	0.7955	FEWER
624	645	a3	11214	281	80	1	2.00	2.51	0.71	0.01	0.13	0.7172	0.8053	FEWER
624	645	a4	4602	66	145	0	2.08	1.43	3.15	0.00	1.26	0.2623	0.3976	FEWER
624	645	b1	3908	42	421	0	4.52	1.07	10.77	0.00	4.06	0.0440	0.0894	FEWER
624	645	b3	4099	47	368	1	4.22	1.15	8.98	0.02	1.95	0.1628	0.2622	FEWER
624	645	b4	4770	216	284	1	12.86	4.53	5.95	0.02	11.18	0.0008	0.0022	FEWER
624	645	c1	3296	116	353	1	12.42	3.52	10.71	0.03	11.15	0.0008	0.0022	FEWER
624	645	c3	4743	70	269	0	3.97	1.48	5.67	0.00	3.26	0.0708	0.1324	FEWER
624	645	c4	6160	89	272	2	3.93	1.44	4.42	0.03	0.55	0.4574	0.5972	FEWER
624	656	a1	1326	12	3	0	0.03	0.90	0.23	0.00	8.33	0.0039	0.0093	FEWER
624	656	a2	2060	26	3	0	0.04	1.26	0.15	0.00	5.72	0.0168	0.0368	FEWER
624	656	a3	3123	227	9	2	0.65	7.27	0.29	0.06	1.18	0.2768	0.4158	MORE
624	656	a4	1286	45	8	0	0.28	3.50	0.62	0.00	0.18	0.6710	0.7774	FEWER
624	656	b1	991	14	4	0	0.06	1.41	0.40	0.00	3.54	0.0597	0.1137	FEWER
624	656	b3	923	16	3	0	0.05	1.73	0.33	0.00	3.94	0.0471	0.0937	FEWER
624	656	b4	1262	179	9	1	1.28	14.18	0.71	0.08	0.05	0.8303	0.8908	FEWER
624	656	c1	813	89	16	0	1.75	10.95	1.97	0.00	1.02	0.3115	0.4595	FEWER
624	656	c3	1321	38	1	0	0.03	2.88	0.08	0.00	7.95	0.0048	0.0113	FEWER
624	656	c4	1722	41	4	0	0.10	2.38	0.23	0.00	1.77	0.1838	0.2922	FEWER
645	656	a1	7533	53	35	2	0.25	0.70	0.46	0.03	6.46	0.0110	0.0251	MORE
645	656	a2	12221	107	75	2	0.66	0.88	0.61	0.02	1.10	0.2944	0.4363	MORE
645	656	a3	17680	145	87	2	0.71	0.82	0.49	0.01	0.88	0.3486	0.5009	MORE
645	656	a4	8029	74	32	3	0.29	0.92	0.40	0.04	16.71	0.0000	0.0001	MORE
645	656	b1	6982	85	41	0	0.50	1.22	0.59	0.00	0.00	0.9990	0.9990	FEWER
645	656	b3	7922	102	60	2	0.77	1.29	0.76	0.03	0.70	0.4030	0.5548	MORE
645	656	b4	8165	114	57	2	0.80	1.40	0.70	0.02	0.64	0.4250	0.5755	MORE

645	656	c1	5727	81	35	1	0.50	1.41	0.61	0.02	0.00	0.9943	0.9973	MORE
645	656	c3	8155	111	53	4	0.72	1.36	0.65	0.05	10.92	0.0010	0.0025	MORE
645	656	c4	10465	125	65	1	0.78	1.19	0.62	0.01	0.10	0.7516	0.8310	MORE
1488	1491	a1	5544	53	77	5	0.74	0.96	1.39	0.09	19.70	0.0000	0.0000	MORE
1488	1491	a2	5030	44	95	8	0.83	0.87	1.89	0.16	55.03	0.0000	0.0000	MORE
1488	1491	a3	3013	38	48	7	0.61	1.26	1.59	0.23	59.07	0.0000	0.0000	MORE
1488	1491	a4	6275	59	117	8	1.10	0.94	1.86	0.13	38.30	0.0000	0.0000	MORE
1488	1491	b1	7883	284	336	94	12.11	3.60	4.26	1.19	593.04	0.0000	0.0000	MORE
1488	1491	b3	6618	233	357	100	12.57	3.52	5.39	1.51	658.72	0.0000	0.0000	MORE
1488	1491	b4	5982	208	237	60	8.24	3.48	3.96	1.00	343.96	0.0000	0.0000	MORE
1488	1491	c1	6771	201	281	55	8.34	2.97	4.15	0.81	274.63	0.0000	0.0000	MORE
1488	1491	c3	5898	190	256	59	8.25	3.22	4.34	1.00	330.77	0.0000	0.0000	MORE
1488	1491	c4	6494	211	168	46	5.46	3.25	2.59	0.71	311.65	0.0000	0.0000	MORE
1639	1641	a1	9742	24	69	1	0.17	0.25	0.71	0.01	0.65	0.4212	0.5727	MORE
1639	1641	a2	12379	39	62	0	0.20	0.32	0.50	0.00	0.48	0.4888	0.6268	FEWER
1639	1641	a3	12747	45	53	0	0.19	0.35	0.42	0.00	0.53	0.4677	0.6082	FEWER
1639	1641	a4	10806	37	51	1	0.17	0.34	0.47	0.01	0.61	0.4343	0.5791	MORE
1639	1641	b1	10235	26	68	1	0.17	0.25	0.66	0.01	0.63	0.4289	0.5783	MORE
1639	1641	b3	11373	959	165	2	13.91	8.43	1.45	0.02	10.38	0.0013	0.0032	FEWER
1639	1641	b4	10742	2194	258	2	52.70	20.42	2.40	0.02	61.56	0.0000	0.0000	FEWER
1639	1641	c1	9457	44	39	2	0.18	0.47	0.41	0.02	9.67	0.0019	0.0046	MORE
1639	1641	c3	10848	165	60	0	0.91	1.52	0.55	0.00	0.19	0.6625	0.7744	FEWER
1639	1641	c4	13077	652	172	2	8.58	4.99	1.32	0.02	4.59	0.0321	0.0674	FEWER
1960	1964	a1	5577	155	160	45	4.45	2.78	2.87	0.81	382.04	0.0000	0.0000	MORE
1960	1964	a2	6094	141	139	36	3.22	2.31	2.28	0.59	339.49	0.0000	0.0000	MORE
1960	1964	a3	5159	60	52	10	0.60	1.16	1.01	0.19	133.72	0.0000	0.0000	MORE
1960	1964	a4	6281	146	115	28	2.67	2.32	1.83	0.45	240.47	0.0000	0.0000	MORE
1960	1964	b1	7370	367	413	123	20.57	4.98	5.60	1.67	563.27	0.0000	0.0000	MORE
1960	1964	b3	6654	346	400	144	20.80	5.20	6.01	2.16	812.37	0.0000	0.0000	MORE
1960	1964	b4	6437	307	291	110	13.88	4.77	4.52	1.71	724.56	0.0000	0.0000	MORE
1960	1964	c1	5789	300	232	87	12.02	5.18	4.01	1.50	506.89	0.0000	0.0000	MORE
1960	1964	c3	5464	231	168	50	7.10	4.23	3.07	0.92	272.64	0.0000	0.0000	MORE
1960	1964	c4	7044	256	217	68	7.89	3.63	3.08	0.97	482.48	0.0000	0.0000	MORE
1960	1972	a1	3978	32	113	8	0.91	0.80	2.84	0.20	49.59	0.0000	0.0000	MORE
1960	1972	a2	4337	33	87	4	0.66	0.76	2.01	0.09	12.51	0.0004	0.0011	MORE
1960	1972	a3	3525	17	57	3	0.27	0.48	1.62	0.09	18.40	0.0000	0.0001	MORE
1960	1972	a4	4645	27	139	7	0.81	0.58	2.99	0.15	41.58	0.0000	0.0000	MORE
1960	1972	b1	5540	92	354	29	5.88	1.66	6.39	0.52	94.56	0.0000	0.0000	MORE
1960	1972	b3	4695	55	285	18	3.34	1.17	6.07	0.38	64.71	0.0000	0.0000	MORE
1960	1972	b4	4669	56	202	13	2.42	1.20	4.33	0.28	44.34	0.0000	0.0000	MORE
1960	1972	c1	4223	57	249	12	3.36	1.35	5.90	0.28	21.23	0.0000	0.0000	MORE
1960	1972	c3	3910	54	158	12	2.18	1.38	4.04	0.31	42.05	0.0000	0.0000	MORE
1960	1972	c4	4927	39	238	10	1.88	0.79	4.83	0.20	32.61	0.0000	0.0000	MORE
1964	1972	a1	4473	48	115	16	1.23	1.07	2.57	0.36	171.10	0.0000	0.0000	MORE
1964	1972	a2	4823	51	91	14	0.96	1.06	1.89	0.29	168.28	0.0000	0.0000	MORE
1964	1972	a3	3859	23	58	8	0.35	0.60	1.50	0.21	151.23	0.0000	0.0000	MORE
1964	1972	a4	5173	43	141	16	1.17	0.83	2.73	0.31	181.57	0.0000	0.0000	MORE
1964	1972	b1	6295	176	359	67	10.04	2.80	5.70	1.06	346.52	0.0000	0.0000	MORE
1964	1972	b3	5482	134	289	52	7.06	2.44	5.27	0.95	302.46	0.0000	0.0000	MORE

1964	1972	b4	5368	96	205	34	3.67	1.79	3.82	0.63	257.01	0.0000	0.0000	MORE
1964	1972	c1	4904	68	253	24	3.51	1.39	5.16	0.49	121.81	0.0000	0.0000	MORE
1964	1972	c3	4508	78	161	16	2.79	1.73	3.57	0.35	61.24	0.0000	0.0000	MORE
1964	1972	c4	5514	72	241	16	3.15	1.31	4.37	0.29	51.38	0.0000	0.0000	MORE
2834	2838	a1	7641	80	25	0	0.26	1.05	0.33	0.00	0.22	0.6391	0.7564	FEWER
2834	2838	a2	10596	66	33	0	0.21	0.62	0.31	0.00	0.43	0.5141	0.6480	FEWER
2834	2838	a3	11701	45	43	0	0.17	0.38	0.37	0.00	0.68	0.4088	0.5581	FEWER
2834	2838	a4	9330	128	24	0	0.33	1.37	0.26	0.00	0.09	0.7642	0.8408	FEWER
2834	2838	b1	8710	474	64	0	3.48	5.44	0.73	0.00	2.72	0.0990	0.1780	FEWER
2834	2838	b3	9027	470	102	0	5.31	5.21	1.13	0.00	4.65	0.0311	0.0659	FEWER
2834	2838	b4	8770	281	108	0	3.46	3.20	1.23	0.00	2.65	0.1036	0.1843	FEWER
2834	2838	c1	7955	476	51	1	3.05	5.98	0.64	0.01	0.84	0.3581	0.5100	FEWER
2834	2838	c3	9033	247	80	0	2.19	2.73	0.89	0.00	1.35	0.2452	0.3752	FEWER
2834	2838	c4	11106	263	134	2	3.17	2.37	1.21	0.02	0.15	0.7004	0.8029	FEWER
2834	2845	a1	5654	29	72	0	0.37	0.51	1.27	0.00	0.05	0.8282	0.8908	FEWER
2834	2845	a2	7795	29	166	0	0.62	0.37	2.13	0.00	0.02	0.8796	0.9187	FEWER
2834	2845	a3	8695	19	137	1	0.30	0.22	1.58	0.01	0.14	0.7114	0.8043	MORE
2834	2845	a4	6993	33	98	1	0.46	0.47	1.40	0.01	0.00	0.9556	0.9703	MORE
2834	2845	b1	6571	107	192	16	3.13	1.63	2.92	0.24	51.28	0.0000	0.0000	MORE
2834	2845	b3	6628	124	267	27	5.00	1.87	4.03	0.41	98.31	0.0000	0.0000	MORE
2834	2845	b4	6525	77	170	1	2.01	1.18	2.61	0.02	0.13	0.7157	0.8053	FEWER
2834	2845	c1	5879	113	136	7	2.61	1.92	2.31	0.12	6.03	0.0141	0.0313	MORE
2834	2845	c3	6847	74	195	3	2.11	1.08	2.85	0.04	0.08	0.7827	0.8527	MORE
2834	2845	c4	8360	65	289	2	2.25	0.78	3.46	0.02	0.03	0.8631	0.9171	FEWER
2834	2858	a1	2622	5	74	0	0.14	0.19	2.82	0.00	0.94	0.3320	0.4855	FEWER
2834	2858	a2	3357	6	42	0	0.08	0.18	1.25	0.00	2.44	0.1183	0.2037	FEWER
2834	2858	a3	3734	2	31	0	0.02	0.05	0.83	0.00	14.20	0.0002	0.0005	FEWER
2834	2858	a4	3317	4	132	0	0.16	0.12	3.98	0.00	0.76	0.3831	0.5363	FEWER
2834	2858	b1	3213	14	206	0	0.90	0.44	6.41	0.00	0.19	0.6637	0.7744	FEWER
2834	2858	b3	3060	9	177	0	0.52	0.29	5.78	0.00	0.00	0.9765	0.9825	FEWER
2834	2858	b4	3073	7	100	0	0.23	0.23	3.25	0.00	0.34	0.5616	0.6868	FEWER
2834	2858	c1	2770	15	207	1	1.12	0.54	7.47	0.04	0.14	0.7090	0.8043	FEWER
2834	2858	c3	3236	8	146	0	0.36	0.25	4.51	0.00	0.06	0.8125	0.8793	FEWER
2834	2858	c4	3897	12	181	0	0.56	0.31	4.64	0.00	0.01	0.9372	0.9576	FEWER
2838	2845	a1	6738	273	112	8	4.54	4.05	1.66	0.12	2.05	0.1523	0.2505	MORE
2838	2845	a2	9172	350	219	13	8.36	3.82	2.39	0.14	2.19	0.1391	0.2331	MORE
2838	2845	a3	10264	68	205	1	1.36	0.66	2.00	0.01	0.02	0.9018	0.9323	FEWER
2838	2845	a4	8382	42	142	3	0.71	0.50	1.69	0.04	4.60	0.0320	0.0674	MORE
2838	2845	b1	7791	353	256	32	11.60	4.53	3.29	0.41	36.98	0.0000	0.0000	MORE
2838	2845	b3	7956	396	349	30	17.37	4.98	4.39	0.38	9.32	0.0023	0.0055	MORE
2838	2845	b4	7731	189	255	8	6.23	2.44	3.30	0.10	0.27	0.6016	0.7277	MORE
2838	2845	c1	6971	109	201	5	3.14	1.56	2.88	0.07	0.61	0.4337	0.5791	MORE
2838	2845	c3	8095	113	305	4	4.26	1.40	3.77	0.05	0.01	0.9040	0.9323	FEWER
2838	2845	c4	9938	192	410	17	7.92	1.93	4.13	0.17	9.88	0.0017	0.0042	MORE
2838	2858	a1	3706	267	82	2	5.91	7.20	2.21	0.05	2.17	0.1411	0.2344	FEWER
2838	2858	a2	4734	345	54	0	3.94	7.29	1.14	0.00	3.27	0.0705	0.1324	FEWER
2838	2858	a3	5303	55	38	0	0.39	1.04	0.72	0.00	0.03	0.8649	0.9171	FEWER
2838	2858	a4	4706	39	152	0	1.26	0.83	3.23	0.00	0.48	0.4896	0.6268	FEWER
2838	2858	b1	4433	350	227	0	17.92	7.90	5.12	0.00	19.38	0.0000	0.0000	FEWER

2838	2858	b3	4388	393	214	0	19.17	8.96	4.88	0.00	20.99	0.0000	0.0000	FEWER
2838	2858	b4	4279	184	111	0	4.77	4.30	2.59	0.00	4.10	0.0428	0.0874	FEWER
2838	2858	c1	3862	106	233	0	6.40	2.74	6.03	0.00	5.95	0.0147	0.0326	FEWER
2838	2858	c3	4484	104	161	0	3.73	2.32	3.59	0.00	2.97	0.0846	0.1563	FEWER
2838	2858	c4	5475	185	204	0	6.89	3.38	3.73	0.00	6.37	0.0116	0.0261	FEWER
2845	2858	a1	5309	169	94	0	2.99	3.18	1.77	0.00	2.18	0.1396	0.2331	FEWER
2845	2858	a2	6760	300	68	0	3.02	4.44	1.01	0.00	2.22	0.1362	0.2306	FEWER
2845	2858	a3	7276	295	40	1	1.62	4.05	0.55	0.01	0.01	0.9220	0.9475	FEWER
2845	2858	a4	6871	249	161	2	5.83	3.62	2.34	0.03	2.02	0.1547	0.2520	FEWER
2845	2858	b1	6420	318	242	0	11.99	4.95	3.77	0.00	12.04	0.0005	0.0014	FEWER
2845	2858	b3	6369	417	232	1	15.19	6.55	3.64	0.02	13.70	0.0002	0.0006	FEWER
2845	2858	b4	6089	410	122	2	8.21	6.73	2.00	0.03	4.35	0.0370	0.0766	FEWER
2845	2858	c1	5559	291	238	1	12.46	5.23	4.28	0.02	10.63	0.0011	0.0028	FEWER
2845	2858	c3	6428	624	182	2	17.67	9.71	2.83	0.03	14.84	0.0001	0.0003	FEWER
2845	2858	c4	7774	594	214	0	16.35	7.64	2.75	0.00	17.11	0.0000	0.0001	FEWER
3900	3905	a1	3302	65	334	5	6.57	1.97	10.12	0.15	0.20	0.6552	0.7699	FEWER
3900	3905	a2	2323	47	251	3	5.08	2.02	10.80	0.13	0.56	0.4537	0.5947	FEWER
3900	3905	a3	1080	16	77	2	1.14	1.48	7.13	0.19	0.12	0.7251	0.8114	MORE
3900	3905	a4	4082	64	284	8	4.45	1.57	6.96	0.20	2.28	0.1313	0.2238	MORE
3900	3905	b1	6265	84	1248	34	16.73	1.34	19.92	0.54	21.27	0.0000	0.0000	MORE
3900	3905	b3	5385	106	1133	40	22.30	1.97	21.04	0.74	17.13	0.0000	0.0001	MORE
3900	3905	b4	3813	53	840	18	11.68	1.39	22.03	0.47	3.78	0.0519	0.1011	MORE
3900	3905	c1	5654	72	1032	23	13.14	1.27	18.25	0.41	8.26	0.0041	0.0096	MORE
3900	3905	c3	3136	42	549	21	7.35	1.34	17.51	0.67	28.88	0.0000	0.0000	MORE
3900	3905	c4	3461	47	556	19	7.55	1.36	16.06	0.55	19.18	0.0000	0.0000	MORE
3900	3907	a1	3026	46	27	1	0.41	1.52	0.89	0.03	0.02	0.8875	0.9240	MORE
3900	3907	a2	2123	42	15	0	0.30	1.98	0.71	0.00	0.14	0.7053	0.8043	FEWER
3900	3907	a3	992	10	14	0	0.14	1.01	1.41	0.00	0.94	0.3336	0.4856	FEWER
3900	3907	a4	3766	42	31	0	0.35	1.12	0.82	0.00	0.07	0.7910	0.8589	FEWER
3900	3907	b1	5798	45	127	1	0.99	0.78	2.19	0.02	0.25	0.6195	0.7438	MORE
3900	3907	b3	4958	41	138	2	1.14	0.83	2.78	0.04	0.12	0.7323	0.8139	MORE
3900	3907	b4	3489	35	152	0	1.52	1.00	4.36	0.00	0.73	0.3937	0.5489	FEWER
3900	3907	c1	5230	45	148	2	1.27	0.86	2.83	0.04	0.04	0.8379	0.8950	MORE
3900	3907	c3	2871	28	47	0	0.46	0.98	1.64	0.00	0.00	0.9503	0.9680	FEWER
3900	3907	c4	3207	30	61	0	0.57	0.94	1.90	0.00	0.01	0.9244	0.9475	FEWER
3905	3907	a1	3551	305	29	4	2.49	8.59	0.82	0.11	0.45	0.5019	0.6351	MORE
3905	3907	a2	2496	226	19	4	1.72	9.05	0.76	0.16	2.04	0.1532	0.2508	MORE
3905	3907	a3	1183	66	15	2	0.84	5.58	1.27	0.17	0.56	0.4528	0.5947	MORE
3905	3907	a4	4412	265	32	2	1.92	6.01	0.73	0.05	0.10	0.7527	0.8310	MORE
3905	3907	b1	6839	1149	149	47	25.03	16.80	2.18	0.69	22.62	0.0000	0.0000	MORE
3905	3907	b3	5717	1013	158	35	28.00	17.72	2.76	0.61	1.89	0.1694	0.2705	MORE
3905	3907	b4	4010	757	163	35	30.77	18.88	4.06	0.87	0.58	0.4460	0.5893	MORE
3905	3907	c1	6090	942	154	34	23.82	15.47	2.53	0.56	4.77	0.0289	0.0621	MORE
3905	3907	c3	3355	499	53	21	7.88	14.87	1.58	0.63	24.10	0.0000	0.0000	MORE
3905	3907	c4	3665	502	68	24	9.31	13.70	1.86	0.65	25.51	0.0000	0.0000	MORE
4202	4203	a1	9830	558	481	3	27.30	5.68	4.89	0.03	23.13	0.0000	0.0000	FEWER
4202	4203	a2	12868	685	441	8	23.48	5.32	3.43	0.06	10.45	0.0012	0.0031	FEWER
4202	4203	a3	13739	685	421	4	20.99	4.99	3.06	0.03	14.07	0.0002	0.0005	FEWER
4202	4203	a4	11557	681	337	7	19.86	5.89	2.92	0.06	8.42	0.0037	0.0089	FEWER

4202	4203	b1	10411	485	959	9	44.68	4.66	9.21	0.09	32.00	0.0000	0.0000	FEWER
4202	4203	b3	12041	649	904	17	48.72	5.39	7.51	0.14	22.87	0.0000	0.0000	FEWER
4202	4203	b4	11981	427	857	9	30.54	3.56	7.15	0.08	16.19	0.0001	0.0002	FEWER
4202	4203	c1	9347	274	507	7	14.86	2.93	5.42	0.07	3.97	0.0462	0.0933	FEWER
4202	4203	c3	12152	334	677	10	18.61	2.75	5.57	0.08	3.85	0.0498	0.0976	FEWER
4202	4203	c4	14318	356	1300	13	32.32	2.49	9.08	0.09	12.36	0.0004	0.0012	FEWER
4202	4204	a1	9364	557	244	46	14.51	5.95	2.61	0.49	72.22	0.0000	0.0000	MORE
4202	4204	a2	12244	685	339	67	18.97	5.59	2.77	0.55	129.79	0.0000	0.0000	MORE
4202	4204	a3	12988	684	323	80	17.01	5.27	2.49	0.62	248.50	0.0000	0.0000	MORE
4202	4204	a4	11055	681	273	58	16.82	6.16	2.47	0.52	107.53	0.0000	0.0000	MORE
4202	4204	b1	9838	484	416	59	20.47	4.92	4.23	0.60	77.62	0.0000	0.0000	MORE
4202	4204	b3	11329	649	473	88	27.10	5.73	4.18	0.78	149.06	0.0000	0.0000	MORE
4202	4204	b4	11352	427	414	54	15.57	3.76	3.65	0.48	99.62	0.0000	0.0000	MORE
4202	4204	c1	8944	274	328	40	10.05	3.06	3.67	0.45	92.44	0.0000	0.0000	MORE
4202	4204	c3	11589	334	438	41	12.62	2.88	3.78	0.35	65.88	0.0000	0.0000	MORE
4202	4204	c4	13655	356	367	39	9.57	2.61	2.69	0.29	92.31	0.0000	0.0000	MORE
4203	4204	a1	9644	443	264	10	12.13	4.59	2.74	0.10	0.24	0.6277	0.7482	FEWER
4203	4204	a2	12642	405	385	14	12.33	3.20	3.05	0.11	0.12	0.7318	0.8139	MORE
4203	4204	a3	13335	416	345	13	10.76	3.12	2.59	0.10	0.30	0.5857	0.7110	MORE
4203	4204	a4	11356	330	289	6	8.40	2.91	2.54	0.05	0.45	0.5007	0.6351	FEWER
4203	4204	b1	10164	844	441	27	36.62	8.30	4.34	0.27	2.59	0.1076	0.1903	FEWER
4203	4204	b3	11640	803	511	30	35.25	6.90	4.39	0.26	0.72	0.3963	0.5501	FEWER
4203	4204	b4	11669	874	438	29	32.81	7.49	3.75	0.25	0.37	0.5407	0.6664	FEWER
4203	4204	c1	9154	496	339	15	18.37	5.42	3.70	0.16	0.49	0.4831	0.6247	FEWER
4203	4204	c3	11959	679	456	23	25.89	5.68	3.81	0.19	0.24	0.6219	0.7440	FEWER
4203	4204	c4	14060	918	403	19	26.31	6.53	2.87	0.14	1.94	0.1634	0.2622	FEWER
4319	4321	a1	6593	182	344	61	9.50	2.76	5.22	0.93	297.23	0.0000	0.0000	MORE
4319	4321	a2	6881	187	310	62	8.42	2.72	4.51	0.90	359.93	0.0000	0.0000	MORE
4319	4321	a3	5679	101	192	25	3.41	1.78	3.38	0.44	137.20	0.0000	0.0000	MORE
4319	4321	a4	8552	167	341	48	6.66	1.95	3.99	0.56	266.09	0.0000	0.0000	MORE
4319	4321	b1	7340	327	346	104	15.41	4.46	4.71	1.42	552.90	0.0000	0.0000	MORE
4319	4321	b3	8269	424	381	125	19.54	5.13	4.61	1.51	623.14	0.0000	0.0000	MORE
4319	4321	b4	6999	307	290	73	12.72	4.39	4.14	1.04	306.52	0.0000	0.0000	MORE
4319	4321	c1	7260	285	276	75	10.83	3.93	3.80	1.03	404.77	0.0000	0.0000	MORE
4319	4321	c3	6923	207	224	41	6.70	2.99	3.24	0.59	181.73	0.0000	0.0000	MORE
4319	4321	c4	8329	225	280	51	7.56	2.70	3.36	0.61	259.20	0.0000	0.0000	MORE
4493	4495	a1	4471	36	42	6	0.34	0.81	0.94	0.13	80.18	0.0000	0.0000	MORE
4493	4495	a2	3543	25	29	4	0.20	0.71	0.82	0.11	53.89	0.0000	0.0000	MORE
4493	4495	a3	1922	9	12	0	0.06	0.47	0.62	0.00	3.54	0.0598	0.1137	FEWER
4493	4495	a4	5237	24	30	1	0.14	0.46	0.57	0.02	0.97	0.3257	0.4784	MORE
4493	4495	b1	7835	206	303	49	7.97	2.63	3.87	0.63	220.32	0.0000	0.0000	MORE
4493	4495	b3	7232	216	274	62	8.18	2.99	3.79	0.86	372.15	0.0000	0.0000	MORE
4493	4495	b4	5232	117	196	44	4.38	2.24	3.75	0.84	370.99	0.0000	0.0000	MORE
4493	4495	c1	6329	110	198	31	3.44	1.74	3.13	0.49	223.52	0.0000	0.0000	MORE
4493	4495	c3	4421	60	104	12	1.41	1.36	2.35	0.27	74.86	0.0000	0.0000	MORE
4493	4495	c4	4655	52	94	15	1.05	1.12	2.02	0.32	177.81	0.0000	0.0000	MORE
4999	5001	a1	6319	420	303	53	20.14	6.65	4.80	0.84	58.51	0.0000	0.0000	MORE
4999	5001	a2	7837	529	415	74	28.01	6.75	5.30	0.94	83.64	0.0000	0.0000	MORE
4999	5001	a3	8046	551	431	101	29.52	6.85	5.36	1.26	193.64	0.0000	0.0000	MORE

4999	5001	a4	8415	474	395	80	22.25	5.63	4.69	0.95	163.79	0.0000	0.0000	MORE
4999	5001	b1	6497	272	426	69	17.83	4.19	6.56	1.06	160.76	0.0000	0.0000	MORE
4999	5001	b3	6490	251	462	50	17.87	3.87	7.12	0.77	62.72	0.0000	0.0000	MORE
4999	5001	b4	6403	262	422	73	17.27	4.09	6.59	1.14	197.20	0.0000	0.0000	MORE
4999	5001	c1	6198	198	415	50	13.26	3.19	6.70	0.81	109.69	0.0000	0.0000	MORE
4999	5001	c3	7395	275	441	55	16.40	3.72	5.96	0.74	97.77	0.0000	0.0000	MORE
4999	5001	c4	9103	341	719	95	26.93	3.75	7.90	1.04	191.19	0.0000	0.0000	MORE
4999	5014	a1	3459	30	17	0	0.15	0.87	0.49	0.00	0.85	0.3553	0.5082	FEWER
4999	5014	a2	4214	37	25	0	0.22	0.88	0.59	0.00	0.36	0.5464	0.6708	FEWER
4999	5014	a3	4312	38	26	0	0.23	0.88	0.60	0.00	0.33	0.5686	0.6929	FEWER
4999	5014	a4	4774	59	27	1	0.33	1.24	0.57	0.02	0.08	0.7714	0.8460	MORE
4999	5014	b1	3814	28	21	0	0.15	0.73	0.55	0.00	0.79	0.3754	0.5300	FEWER
4999	5014	b3	3591	19	20	0	0.11	0.53	0.56	0.00	1.48	0.2231	0.3430	FEWER
4999	5014	b4	3607	28	25	0	0.19	0.78	0.69	0.00	0.49	0.4842	0.6247	FEWER
4999	5014	c1	3688	20	18	0	0.10	0.54	0.49	0.00	1.68	0.1955	0.3033	FEWER
4999	5014	c3	4211	25	21	0	0.12	0.59	0.50	0.00	1.14	0.2852	0.4264	FEWER
4999	5014	c4	5110	32	26	0	0.16	0.63	0.51	0.00	0.71	0.4007	0.5539	FEWER
5001	5014	a1	3944	4	23	0	0.02	0.10	0.58	0.00	9.81	0.0017	0.0043	FEWER
5001	5014	a2	4833	12	29	0	0.07	0.25	0.60	0.00	2.57	0.1092	0.1921	FEWER
5001	5014	a3	4996	11	30	0	0.07	0.22	0.60	0.00	2.87	0.0900	0.1636	FEWER
5001	5014	a4	5419	9	31	0	0.05	0.17	0.57	0.00	3.94	0.0473	0.0937	FEWER
5001	5014	b1	4365	7	25	0	0.04	0.16	0.57	0.00	5.31	0.0211	0.0461	FEWER
5001	5014	b3	4215	13	31	1	0.10	0.31	0.74	0.02	1.73	0.1886	0.2955	MORE
5001	5014	b4	4181	10	29	1	0.07	0.24	0.69	0.02	2.70	0.1004	0.1796	MORE
5001	5014	c1	4292	16	29	2	0.11	0.37	0.68	0.05	18.11	0.0000	0.0001	MORE
5001	5014	c3	4861	15	26	0	0.08	0.31	0.53	0.00	2.21	0.1367	0.2306	FEWER
5001	5014	c4	5901	19	39	0	0.13	0.32	0.66	0.00	1.13	0.2883	0.4292	FEWER
5285	5309	a1	1465	2	91	0	0.12	0.14	6.21	0.00	1.21	0.2706	0.4084	FEWER
5285	5309	a2	1358	3	92	0	0.20	0.22	6.77	0.00	0.47	0.4949	0.6311	FEWER
5285	5309	a3	866	0	48	0	0.00	0.00	5.54	0.00	NA	NA	NA	SAME
5285	5309	a4	2052	1	128	0	0.06	0.05	6.24	0.00	3.28	0.0703	0.1324	FEWER
5285	5309	b1	2071	5	389	0	0.94	0.24	18.78	0.00	0.25	0.6146	0.7407	FEWER
5285	5309	b3	1412	7	274	1	1.36	0.50	19.41	0.07	0.02	0.8921	0.9258	FEWER
5285	5309	b4	1356	5	256	2	0.94	0.37	18.88	0.15	0.41	0.5244	0.6585	MORE
5285	5309	c1	1665	1	261	1	0.16	0.06	15.68	0.06	0.89	0.3450	0.4981	MORE
5285	5309	c3	1331	2	186	1	0.28	0.15	13.97	0.08	0.20	0.6527	0.7696	MORE
5285	5309	c4	1555	4	340	3	0.87	0.26	21.86	0.19	3.88	0.0490	0.0965	MORE

**Supplementary Table 1.** Linkage analysis of informative pairs of highly polymorphic sites.

**Site1\_id/Site2\_id:** position of first/second site; **Sample:** DNA sample; **Coverage:** number of reads overlapping with both sites; **Site1\_muts/Site2\_muts:** number of reads with mutations at first/second site; **Both\_muts:** number of reads with mutations at both sites; **Exp\_muts:** expected number of reads with mutations at both sites (given proportions of reads with mutations at each site and assumption of independence); **Site1\_perc/Site2\_perc/Both\_perc:** percentage of reads covering both sites showing mutations at first/second/both site(s); **chisquare:** Yates' continuity-corrected Chi-square values; **prob:** probability associated with each chi-squared value; **fdr:** probability adjusted for expected false discovery with multiple comparisons; **direction:** logical value indicating if the observed number of co-occurring mutations was more or less than the expected number. Red-colored rows show an FDR probability < 0.05.