

TABLE S5

Summary of outlier analysis for the worldwide human SNP data (JAKOBSSON *et al.* 2008). For each genetic region we give the chromosome number (Chrom.), gene ID (Gene), and classification as a low (l) or high (h) ϕ_{ST} outlier as well as whether outlier status was at $a = 0.5$ or $a = 0.95$. Additionally we provide the median and credible intervals for each locus's ϕ_{ST} and quantile in the genome-level distribution.

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
1	AKT3	l-0.5	0.0015	0.0167	0.1217	-0.1017	-0.0455	0.0201
1	C1orf116	l-0.5	0.0016	0.0190	0.1253	-0.1007	-0.0420	0.0209
1	C1orf117	l-0.5	0.0018	0.0137	0.0711	-0.0981	-0.0508	-0.0009
1	GPR161	l-0.5	0.0001	0.0061	0.1521	-0.1631	-0.0712	0.0297
1	GSTM4	l-0.5	0.0011	0.0205	0.1673	-0.1089	-0.0399	0.0335
1	MYCBP	l-0.5	0.0019	0.0146	0.0828	-0.0969	-0.0493	0.0048
1	PLA2G2D	l-0.5	0.0014	0.0243	0.1920	-0.1036	-0.0351	0.0399
1	ACADM	h-0.5	0.9536	0.9938	0.9995	0.2119	0.2655	0.3168
1	AIM1L	h-0.5	0.9249	0.9851	0.9981	0.1960	0.2441	0.2906
1	AP4B1	h-0.5	0.9489	0.9951	0.9997	0.2087	0.2710	0.3267
1	ASPM	h-0.5	0.8376	0.9752	0.9981	0.1653	0.2304	0.2903
1	ATPAF1	h-0.5	0.9639	0.9971	0.9999	0.2192	0.2824	0.3420
1	C1orf113	h-0.5	0.9074	0.9882	0.9992	0.1883	0.2500	0.3076
1	C1orf114	h-0.5	0.8921	0.9770	0.9973	0.1825	0.2325	0.2834
1	C1orf123	h-0.5	0.9202	0.9903	0.9994	0.1935	0.2550	0.3111
1	C1orf161	h-0.5	0.9433	0.9886	0.9987	0.2055	0.2510	0.2984
1	C1orf83	h-0.5	0.8171	0.9774	0.9987	0.1603	0.2330	0.2983
1	C1orf83	h-0.5	0.9513	0.9960	0.9998	0.2101	0.2755	0.3345
1	CD34	h-0.5	0.9540	0.9915	0.9990	0.2125	0.2581	0.3017
1	ELA3B	h-0.5	0.8788	0.9763	0.9973	0.1782	0.2318	0.2832
1	FCER1A	h-0.5	0.9222	0.9829	0.9975	0.1951	0.2405	0.2846
1	GPR88	h-0.5	0.9547	0.9900	0.9984	0.2127	0.2540	0.2942

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
1	HMCN1	h-0.5	0.9608	0.9982	1.0000	0.2174	0.2915	0.3563
1	HNRPR	h-0.5	0.9246	0.9884	0.9989	0.1960	0.2506	0.3016
1	ILF2	h-0.5	0.9176	0.9845	0.9981	0.1926	0.2431	0.2907
1	INSRR	h-0.5	0.8887	0.9753	0.9965	0.1814	0.2304	0.2779
1	KCNT2	h-0.5	0.9559	0.9981	1.0000	0.2131	0.2912	0.3615
1	KIAA0319L	h-0.5	0.8693	0.9802	0.9986	0.1750	0.2366	0.2958
1	LRRC7	h-0.5	0.9286	0.9898	0.9993	0.1978	0.2539	0.3104
1	MEF2D	h-0.5	0.9292	0.9855	0.9982	0.1980	0.2449	0.2914
1	NBL1	h-0.5	0.9640	0.9929	0.9991	0.2204	0.2627	0.3031
1	NBPF3	h-0.5	0.9042	0.9777	0.9967	0.1870	0.2334	0.2789
1	ORC1L	h-0.5	0.9018	0.9832	0.9985	0.1860	0.2410	0.2956
1	PHTF1	h-0.5	0.9478	0.9909	0.9991	0.2078	0.2563	0.3049
1	PSMA5	h-0.5	0.9569	0.9947	0.9996	0.2142	0.2688	0.3209
1	RGL1	h-0.5	0.9513	0.9930	0.9995	0.2103	0.2627	0.3141
1	SNX27	h-0.5	0.9244	0.9779	0.9954	0.1959	0.2337	0.2721
1	TRIM46	h-0.5	0.9376	0.9838	0.9971	0.2023	0.2420	0.2815
1	TM2D1	l-0.95	0.0008	0.0051	0.0273	-0.1154	-0.0755	-0.0320
1	C1orf41	h-0.95	0.9968	0.9998	1.0000	0.2798	0.3322	0.3808
1	CLCNKB	h-0.95	0.9859	0.9988	0.9999	0.2456	0.2997	0.3505
1	CLSPN	h-0.95	0.9975	0.9998	1.0000	0.2855	0.3343	0.3793
1	EIF2C1	h-0.95	0.9999	1.0000	1.0000	0.3387	0.3881	0.4335
1	EIF2C3	h-0.95	0.9961	0.9997	1.0000	0.2760	0.3237	0.3695
1	EPS15	h-0.95	0.9862	0.9989	1.0000	0.2461	0.3010	0.3552
1	FRRS1	h-0.95	0.9710	0.9957	0.9997	0.2256	0.2740	0.3218
1	KHDRBS1	h-0.95	0.9757	0.9984	1.0000	0.2309	0.2947	0.3554
1	KIAA0319L	h-0.95	0.9664	0.9963	0.9998	0.2214	0.2768	0.3306
1	KIAA0907	h-0.95	0.9712	0.9989	1.0000	0.2261	0.3016	0.3673
1	MASP2	h-0.95	0.9899	0.9989	0.9999	0.2540	0.3015	0.3473
1	OSBPL9	h-0.95	0.9796	0.9986	1.0000	0.2354	0.2974	0.3520

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
1	PMVK	h-0.95	0.9848	0.9998	1.0000	0.2434	0.3282	0.4002
1	POLR3GL	h-0.95	0.9871	0.9997	1.0000	0.2475	0.3256	0.3922
1	RABGAP1L	h-0.95	0.9755	0.9974	0.9999	0.2311	0.2844	0.3359
1	RABGGTB	h-0.95	0.9757	0.9961	0.9996	0.2311	0.2757	0.3174
1	RBBP5	h-0.95	0.9943	0.9996	1.0000	0.2673	0.3194	0.3679
1	RC3H1	h-0.95	0.9912	0.9994	1.0000	0.2571	0.3129	0.3632
1	SH3BP5L	h-0.95	0.9982	0.9999	1.0000	0.2922	0.3371	0.3799
1	SHE	h-0.95	0.9889	0.9990	0.9999	0.2514	0.3028	0.3492
1	SLC16A1	h-0.95	0.9896	0.9993	1.0000	0.2533	0.3095	0.3599
1	SLC9A11	h-0.95	0.9987	1.0000	1.0000	0.2977	0.3642	0.4257
1	SYF2	h-0.95	0.9998	1.0000	1.0000	0.3325	0.4019	0.4630
1	UBE2J2	h-0.95	0.9767	0.9996	1.0000	0.2321	0.3199	0.3941
1	YY1AP1	h-0.95	0.9811	0.9996	1.0000	0.2375	0.3189	0.3886
1	ZBTB41	h-0.95	0.9975	0.9998	1.0000	0.2856	0.3355	0.3850
1	ZMYM4	h-0.95	0.9860	0.9982	0.9999	0.2458	0.2920	0.3372
1	ZMYM6	h-0.95	0.9997	1.0000	1.0000	0.3267	0.3962	0.4585
2	EIF2AK2	l-0.5	0.0010	0.0145	0.1055	-0.0956	-0.0384	0.0216
2	MGC39518	l-0.5	0.0003	0.0125	0.1879	-0.1204	-0.0421	0.0451
2	SMYD5	l-0.5	0.0049	0.0219	0.0819	-0.0632	-0.0278	0.0123
2	XPO1	l-0.5	0.0003	0.0164	0.2286	-0.1175	-0.0352	0.0541
2	ALK	h-0.5	0.8903	0.9772	0.9971	0.1800	0.2279	0.2737
2	CAB39	h-0.5	0.9596	0.9938	0.9996	0.2123	0.2590	0.3075
2	CHST10	h-0.5	0.8857	0.9832	0.9988	0.1785	0.2357	0.2910
2	CREG2	h-0.5	0.8386	0.9791	0.9986	0.1645	0.2304	0.2885
2	CTDSP1	h-0.5	0.9642	0.9928	0.9990	0.2160	0.2556	0.2937
2	FLJ20758	h-0.5	0.9261	0.9873	0.9987	0.1937	0.2427	0.2892
2	KYNU	h-0.5	0.9414	0.9933	0.9997	0.2005	0.2571	0.3138
2	LOC51252	h-0.5	0.9550	0.9897	0.9984	0.2096	0.2476	0.2849
2	MALL	h-0.5	0.9563	0.9971	0.9999	0.2097	0.2747	0.3367

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
2	MKI67IP	h-0.5	0.9526	0.9959	0.9998	0.2076	0.2674	0.3228
2	ORMDL1	h-0.5	0.8793	0.9895	0.9997	0.1765	0.2470	0.3128
2	REEP1	h-0.5	0.8450	0.9847	0.9994	0.1661	0.2382	0.3043
2	REEP1	h-0.5	0.9332	0.9911	0.9994	0.1968	0.2507	0.3046
2	RHBDD1	h-0.5	0.9498	0.9937	0.9995	0.2065	0.2583	0.3075
2	RNF149	h-0.5	0.9336	0.9899	0.9989	0.1970	0.2478	0.2930
2	SELI	h-0.5	0.9476	0.9964	0.9999	0.2044	0.2702	0.3299
2	STK11IP	h-0.5	0.8709	0.9848	0.9991	0.1736	0.2381	0.2956
2	SULT1C2	h-0.5	0.9477	0.9948	0.9997	0.2048	0.2625	0.3164
2	TMEFF2	h-0.5	0.9186	0.9854	0.9981	0.1904	0.2391	0.2841
2	TRPM8	h-0.5	0.8220	0.9842	0.9995	0.1605	0.2373	0.3055
2	ZNF512	h-0.5	0.9559	0.9948	0.9997	0.2100	0.2627	0.3143
2	RIF1	l-0.95	0.0006	0.0048	0.0267	-0.1051	-0.0646	-0.0226
2	AOX2	h-0.95	0.9840	0.9980	0.9999	0.2371	0.2823	0.3275
2	BIN1	h-0.95	0.9919	0.9994	1.0000	0.2525	0.3044	0.3556
2	C2orf13	h-0.95	0.9994	1.0000	1.0000	0.3041	0.3569	0.4085
2	CMKOR1	h-0.95	0.9707	0.9967	0.9998	0.2216	0.2720	0.3213
2	KIAA1212	h-0.95	0.9818	0.9990	1.0000	0.2333	0.2946	0.3490
2	PROKR1	h-0.95	0.9948	0.9997	1.0000	0.2625	0.3165	0.3658
2	PSCDBP	h-0.95	0.9968	0.9998	1.0000	0.2725	0.3220	0.3735
2	RAB3GAP1	h-0.95	0.9625	0.9986	1.0000	0.2137	0.2881	0.3572
2	SMC6L1	h-0.95	0.9960	1.0000	1.0000	0.2677	0.3464	0.4152
2	SMYD1	h-0.95	1.0000	1.0000	1.0000	0.3423	0.3974	0.4457
2	ZRANB3	h-0.95	0.9765	0.9992	1.0000	0.2268	0.2993	0.3597
3	CEP63	l-0.5	0.0015	0.0108	0.0543	-0.0848	-0.0445	-0.0017
3	GPR156	l-0.5	0.0023	0.0122	0.0503	-0.0767	-0.0415	-0.0044
3	ARL6	h-0.5	0.9189	0.9826	0.9977	0.1864	0.2296	0.2720
3	B3GNT5	h-0.5	0.9435	0.9935	0.9996	0.1977	0.2522	0.3032
3	BCL6	h-0.5	0.9323	0.9882	0.9987	0.1927	0.2388	0.2832

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
3	C3orf17	h-0.5	0.9370	0.9900	0.9991	0.1943	0.2426	0.2906
3	C3orf25	h-0.5	0.9158	0.9838	0.9983	0.1847	0.2315	0.2776
3	DNAH1	h-0.5	0.9268	0.9860	0.9985	0.1898	0.2347	0.2800
3	FLJ25996	h-0.5	0.9350	0.9882	0.9986	0.1935	0.2389	0.2821
3	MAPKAPK3	h-0.5	0.8826	0.9899	0.9997	0.1736	0.2424	0.3076
3	NGLY1	h-0.5	0.9304	0.9885	0.9990	0.1910	0.2392	0.2876
3	NR2C2	h-0.5	0.9094	0.9770	0.9961	0.1831	0.2227	0.2617
3	PCAF	h-0.5	0.9187	0.9856	0.9985	0.1866	0.2340	0.2793
3	PLCXD2	h-0.5	0.9041	0.9751	0.9963	0.1803	0.2207	0.2623
3	PLS1	h-0.5	0.9424	0.9894	0.9989	0.1976	0.2415	0.2861
3	RASA2	h-0.5	0.8803	0.9806	0.9986	0.1725	0.2271	0.2824
3	RBP2	h-0.5	0.8786	0.9843	0.9991	0.1718	0.2322	0.2907
3	UNQ846	h-0.5	0.9097	0.9806	0.9975	0.1829	0.2271	0.2704
3	BTLA	h-0.95	0.9910	0.9993	1.0000	0.2450	0.2953	0.3438
3	C3orf23	h-0.95	0.9959	0.9997	1.0000	0.2624	0.3097	0.3539
3	C3orf37	h-0.95	0.9697	0.9977	0.9999	0.2157	0.2733	0.3248
3	C3orf58	h-0.95	0.9842	0.9992	1.0000	0.2326	0.2921	0.3468
3	COPG	h-0.95	0.9941	0.9997	1.0000	0.2541	0.3098	0.3629
3	GNAI2	h-0.95	0.9980	0.9999	1.0000	0.2761	0.3260	0.3715
3	GORASP1	h-0.95	0.9995	1.0000	1.0000	0.2997	0.3492	0.3956
3	LMLN	h-0.95	0.9778	0.9981	0.9999	0.2234	0.2769	0.3268
3	LTF	h-0.95	0.9766	0.9978	0.9999	0.2225	0.2743	0.3243
3	MSL2L1	h-0.95	0.9707	0.9983	1.0000	0.2165	0.2792	0.3377
3	NPCDR1	h-0.95	0.9794	0.9985	0.9999	0.2254	0.2813	0.3323
3	RBP1	h-0.95	0.9772	0.9971	0.9998	0.2232	0.2689	0.3134
3	TRAK1	h-0.95	0.9983	1.0000	1.0000	0.2783	0.3344	0.3882
4	KLHL8	l-0.5	0.0001	0.0080	0.1424	-0.1536	-0.0674	0.0264
4	C4orf18	h-0.5	0.9279	0.9814	0.9966	0.2011	0.2425	0.2824
4	CCDC4	h-0.5	0.9555	0.9926	0.9993	0.2178	0.2660	0.3140

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
4	HCAP-G	h-0.5	0.9144	0.9843	0.9984	0.1941	0.2475	0.2979
4	LEF1	h-0.5	0.9273	0.9826	0.9974	0.2010	0.2444	0.2878
4	MOBKL1A	h-0.5	0.9038	0.9853	0.9990	0.1899	0.2490	0.3071
4	NUDT6	h-0.5	0.9562	0.9924	0.9992	0.2182	0.2652	0.3109
4	NUP54	h-0.5	0.9501	0.9935	0.9996	0.2135	0.2693	0.3228
4	STX18	h-0.5	0.9399	0.9877	0.9986	0.2078	0.2536	0.3022
4	TBC1D19	h-0.5	0.9401	0.9911	0.9993	0.2076	0.2618	0.3156
4	TLR10	h-0.5	0.8653	0.9763	0.9978	0.1768	0.2357	0.2920
4	ARHGAP10	h-0.95	0.9977	0.9998	1.0000	0.2930	0.3374	0.3778
4	CENTD1	h-0.95	0.9902	0.9984	0.9999	0.2597	0.3007	0.3447
4	DCK	h-0.95	0.9999	1.0000	1.0000	0.3526	0.4099	0.4624
4	ENAM	h-0.95	0.9993	1.0000	1.0000	0.3171	0.3827	0.4396
4	ESSPL	h-0.95	0.9755	0.9970	0.9998	0.2361	0.2863	0.3362
4	ETFDH	h-0.95	0.9992	1.0000	1.0000	0.3127	0.3954	0.4679
4	LRBA	h-0.95	0.9765	0.9975	0.9999	0.2361	0.2906	0.3455
4	NPNT	h-0.95	0.9859	0.9989	1.0000	0.2508	0.3070	0.3613
4	PHF22	h-0.95	0.9985	0.9999	1.0000	0.3024	0.3501	0.3943
4	POLN	h-0.95	0.9869	0.9984	0.9999	0.2516	0.3001	0.3454
4	SLC30A9	h-0.95	0.9916	0.9991	1.0000	0.2641	0.3107	0.3573
4	TMEM34	h-0.95	0.9989	1.0000	1.0000	0.3075	0.3612	0.4108
5	DNAJA5	l-0.5	0.0010	0.0071	0.0386	-0.0917	-0.0542	-0.0132
5	C6	h-0.5	0.8581	0.9869	0.9996	0.1593	0.2280	0.2928
5	CD180	h-0.5	0.8830	0.9792	0.9981	0.1674	0.2171	0.2665
5	GMCL1L	h-0.5	0.9080	0.9871	0.9991	0.1753	0.2284	0.2809
5	HSPA4	h-0.5	0.9065	0.9840	0.9984	0.1748	0.2236	0.2694
5	IL4	h-0.5	0.9003	0.9792	0.9975	0.1729	0.2173	0.2615
5	LOC51334	h-0.5	0.9439	0.9887	0.9986	0.1908	0.2315	0.2708
5	LOC90624	h-0.5	0.9509	0.9917	0.9993	0.1951	0.2384	0.2826
5	MARCH6	h-0.5	0.9528	0.9897	0.9985	0.1963	0.2336	0.2703

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
5	SKP2	h-0.5	0.9493	0.9936	0.9996	0.1934	0.2439	0.2916
5	SRFBP1	h-0.5	0.8352	0.9788	0.9988	0.1541	0.2166	0.2760
5	GPBP1	l-0.95	0.0002	0.0023	0.0206	-0.1175	-0.0774	-0.0293
5	RBM22	l-0.95	0.0000	0.0004	0.0386	-0.1900	-0.1092	-0.0118
5	HINT1	h-0.95	0.9818	0.9987	1.0000	0.2207	0.2745	0.3265
5	LOC92270	h-0.95	0.9862	0.9994	1.0000	0.2273	0.2886	0.3431
5	MGC23985	h-0.95	0.9958	0.9998	1.0000	0.2533	0.3026	0.3497
5	MSX2	h-0.95	0.9929	0.9997	1.0000	0.2417	0.2991	0.3511
5	NSUN2	h-0.95	0.9796	0.9961	0.9996	0.2176	0.2540	0.2929
5	PITX1	h-0.95	0.9988	1.0000	1.0000	0.2753	0.3344	0.3864
5	ROPN1L	h-0.95	0.9688	0.9952	0.9996	0.2080	0.2498	0.2925
5	SDHA	h-0.95	0.9773	0.9974	0.9998	0.2159	0.2619	0.3059
5	SLC36A2	h-0.95	0.9893	0.9996	1.0000	0.2325	0.2929	0.3505
5	WDR70	h-0.95	0.9943	0.9997	1.0000	0.2455	0.2979	0.3491
6	FRS3	l-0.5	0.0003	0.0041	0.0388	-0.1045	-0.0605	-0.0098
6	GCM2	l-0.5	0.0014	0.0173	0.1098	-0.0787	-0.0300	0.0207
6	KIFC1	l-0.5	0.0003	0.0099	0.1468	-0.1083	-0.0425	0.0312
6	MYCT1	l-0.5	0.0026	0.0239	0.1380	-0.0682	-0.0222	0.0287
6	TDRD6	l-0.5	0.0004	0.0053	0.0448	-0.1009	-0.0555	-0.0063
6	ZNF187	l-0.5	0.0030	0.0223	0.1170	-0.0654	-0.0239	0.0232
6	C6orf146	h-0.5	0.9155	0.9867	0.9989	0.1696	0.2166	0.2631
6	C6orf70	h-0.5	0.8524	0.9768	0.9985	0.1509	0.2040	0.2573
6	CDC40	h-0.5	0.8677	0.9762	0.9979	0.1548	0.2034	0.2521
6	CYB5R4	h-0.5	0.9572	0.9951	0.9997	0.1886	0.2369	0.2827
6	FNDC1	h-0.5	0.9051	0.9779	0.9969	0.1658	0.2051	0.2448
6	IHPK3	h-0.5	0.8933	0.9791	0.9975	0.1624	0.2062	0.2490
6	IL20RA	h-0.5	0.8823	0.9753	0.9972	0.1591	0.2024	0.2471
6	PEX6	h-0.5	0.9103	0.9771	0.9958	0.1682	0.2044	0.2388
6	PGBD1	h-0.5	0.8928	0.9843	0.9990	0.1622	0.2132	0.2650

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
6	POPDC3	h-0.5	0.9417	0.9948	0.9998	0.1799	0.2359	0.2923
6	SRPK1	h-0.5	0.8672	0.9891	0.9997	0.1547	0.2210	0.2831
6	TAGAP	h-0.5	0.9185	0.9893	0.9993	0.1706	0.2214	0.2709
6	UBD	h-0.5	0.9104	0.9962	0.9999	0.1672	0.2418	0.3070
6	VIP	h-0.5	0.9282	0.9951	0.9999	0.1743	0.2367	0.2935
6	ZNF435	h-0.5	0.9373	0.9855	0.9978	0.1788	0.2147	0.2508
6	C6orf125	h-0.95	0.9783	0.9984	0.9999	0.2060	0.2567	0.3038
6	C6orf167	h-0.95	0.9725	0.9968	0.9998	0.2003	0.2447	0.2880
6	C6orf206	h-0.95	0.9992	1.0000	1.0000	0.2669	0.3475	0.4119
6	GSTA5	h-0.95	0.9781	0.9986	1.0000	0.2057	0.2587	0.3096
6	KIAA0408	h-0.95	0.9932	0.9998	1.0000	0.2305	0.2864	0.3374
6	PAK1IP1	h-0.95	0.9994	1.0000	1.0000	0.2722	0.3395	0.3991
6	SNRPC	h-0.95	0.9881	0.9994	1.0000	0.2194	0.2732	0.3227
6	VNN3	h-0.95	0.9711	0.9976	0.9999	0.1988	0.2501	0.2996
7	IGF2BP3	l-0.5	0.0001	0.0043	0.0569	-0.1411	-0.0728	-0.0046
7	PIP	l-0.5	0.0012	0.0186	0.1446	-0.0982	-0.0374	0.0290
7	C7orf34	h-0.5	0.8282	0.9763	0.9989	0.1589	0.2243	0.2905
7	CREB3L2	h-0.5	0.9083	0.9757	0.9961	0.1840	0.2240	0.2661
7	EPHB6	h-0.5	0.9386	0.9912	0.9994	0.1967	0.2488	0.3030
7	FAM3C	h-0.5	0.9403	0.9912	0.9993	0.1978	0.2488	0.2993
7	MDH2	h-0.5	0.9449	0.9929	0.9995	0.2003	0.2537	0.3039
7	PBEF1	h-0.5	0.9085	0.9791	0.9969	0.1837	0.2276	0.2701
7	PSCD3	h-0.5	0.8635	0.9754	0.9976	0.1680	0.2233	0.2764
7	NYD-SP18	h-0.5	0.8941	0.9879	0.9994	0.1778	0.2413	0.3028
7	RPA3	h-0.5	0.9227	0.9784	0.9956	0.1896	0.2269	0.2628
7	SP4	h-0.5	0.9258	0.9846	0.9982	0.1911	0.2354	0.2805
7	TRIM24	h-0.5	0.9181	0.9852	0.9985	0.1871	0.2364	0.2843
7	CYP3A43	h-0.95	0.9678	0.9963	0.9998	0.2160	0.2674	0.3187
7	CYP3A4	h-0.95	0.9896	0.9990	0.9999	0.2453	0.2928	0.3384

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
7	CYP3A5	h-0.95	0.9997	1.0000	1.0000	0.3147	0.3589	0.4011
7	DDX56	h-0.95	0.9896	0.9996	1.0000	0.2449	0.3094	0.3660
7	FLJ10324	h-0.95	0.9736	0.9969	0.9998	0.2214	0.2714	0.3188
7	FLJ12571	h-0.95	0.9949	0.9997	1.0000	0.2615	0.3126	0.3597
7	ING3	h-0.95	0.9839	0.9980	0.9999	0.2349	0.2804	0.3245
7	KCND2	h-0.95	0.9762	0.9966	0.9998	0.2249	0.2692	0.3172
7	MYH16	h-0.95	0.9936	0.9997	1.0000	0.2565	0.3131	0.3663
7	SMURF1	h-0.95	0.9961	0.9997	1.0000	0.2674	0.3123	0.3575
7	SVH	h-0.95	0.9999	1.0000	1.0000	0.3252	0.4036	0.4681
7	TRIAD3	h-0.95	0.9990	1.0000	1.0000	0.2925	0.3765	0.4434
7	TRIM4	h-0.95	0.9893	0.9995	1.0000	0.2441	0.3060	0.3639
7	ZFP95	h-0.95	0.9999	1.0000	1.0000	0.3291	0.3757	0.4177
8	EXTL3	l-0.5	0.0017	0.0111	0.0564	-0.0708	-0.0363	0.0030
8	ZHX1	l-0.5	0.0000	0.0037	0.1125	-0.1293	-0.0582	0.0243
8	ADCK5	h-0.5	0.8071	0.9781	0.9991	0.1410	0.2044	0.2643
8	ASH2L	h-0.5	0.8827	0.9764	0.9972	0.1596	0.2027	0.2447
8	C8orf72	h-0.5	0.8684	0.9757	0.9982	0.1553	0.2021	0.2531
8	CHRNA6	h-0.5	0.8063	0.9830	0.9995	0.1409	0.2101	0.2734
8	CNOT7	h-0.5	0.8986	0.9773	0.9968	0.1640	0.2036	0.2418
8	FLJ23356	h-0.5	0.8522	0.9829	0.9991	0.1508	0.2100	0.2644
8	KIAA0196	h-0.5	0.8861	0.9781	0.9975	0.1599	0.2044	0.2474
8	KIAA1967	h-0.5	0.9152	0.9847	0.9986	0.1693	0.2124	0.2558
8	LRP12	h-0.5	0.8505	0.9780	0.9986	0.1508	0.2044	0.2569
8	POTE8	h-0.5	0.8039	0.9887	0.9998	0.1404	0.2188	0.2901
8	SAMD12	h-0.5	0.9250	0.9859	0.9984	0.1738	0.2142	0.2533
8	SDCBP	h-0.5	0.8948	0.9832	0.9986	0.1628	0.2105	0.2566
8	SLA	h-0.5	0.9488	0.9922	0.9994	0.1847	0.2264	0.2685
8	SLC30A8	h-0.5	0.8587	0.9754	0.9979	0.1530	0.2019	0.2495
8	TEX15	h-0.5	0.9448	0.9947	0.9998	0.1815	0.2340	0.2851

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
8	TSPYL5	h-0.5	0.9590	0.9968	0.9999	0.1892	0.2428	0.2921
8	UBXD6	h-0.5	0.9613	0.9926	0.9991	0.1916	0.2274	0.2617
8	ZNF34	h-0.5	0.9154	0.9893	0.9994	0.1692	0.2201	0.2701
8	C8orf77	h-0.95	0.9849	0.9988	1.0000	0.2131	0.2595	0.3041
8	CRISPLD1	h-0.95	0.9872	0.9989	1.0000	0.2174	0.2610	0.3049
8	IKBKB	h-0.95	0.9750	0.9982	1.0000	0.2016	0.2532	0.3034
8	TCEA1	h-0.95	0.9806	0.9987	1.0000	0.2077	0.2587	0.3090
8	TMEM64	h-0.95	0.9744	0.9986	1.0000	0.2008	0.2575	0.3133
8	ZNF395	h-0.95	0.9868	0.9995	1.0000	0.2152	0.2740	0.3292
9	C9orf152	l-0.5	0.0009	0.0089	0.0591	-0.0869	-0.0446	0.0029
9	PMPCA	l-0.5	0.0009	0.0204	0.1845	-0.0880	-0.0255	0.0422
9	C5	h-0.5	0.9506	0.9921	0.9993	0.1909	0.2349	0.2771
9	CDC14B	h-0.5	0.8811	0.9847	0.9992	0.1639	0.2203	0.2762
9	CDKN2A	h-0.5	0.9539	0.9925	0.9994	0.1933	0.2355	0.2798
9	CTSL2	h-0.5	0.9390	0.9887	0.9987	0.1855	0.2271	0.2674
9	DAB2IP	h-0.5	0.9607	0.9987	1.0000	0.1964	0.2680	0.3335
9	DBC1	h-0.5	0.9401	0.9892	0.9989	0.1860	0.2279	0.2691
9	GARNL3	h-0.5	0.8711	0.9861	0.9995	0.1609	0.2225	0.2838
9	IARS	h-0.5	0.9418	0.9869	0.9980	0.1871	0.2237	0.2596
9	KIAA1539	h-0.5	0.9371	0.9869	0.9985	0.1844	0.2235	0.2645
9	LAMC3	h-0.5	0.9604	0.9935	0.9993	0.1979	0.2381	0.2778
9	NDUFA8	h-0.5	0.9580	0.9927	0.9992	0.1959	0.2358	0.2757
9	NPR2	h-0.5	0.9598	0.9960	0.9998	0.1968	0.2479	0.2943
9	NR6A1	h-0.5	0.8937	0.9890	0.9995	0.1670	0.2275	0.2846
9	C9orf114	h-0.95	0.9843	0.9979	0.9998	0.2203	0.2594	0.2969
9	C9orf89	h-0.95	0.9873	0.9987	0.9999	0.2247	0.2679	0.3117
9	FLJ16636	h-0.95	0.9999	1.0000	1.0000	0.3092	0.4013	0.4717
9	PRG-3	h-0.95	0.9976	1.0000	1.0000	0.2567	0.3238	0.3828
9	RABGAP1	h-0.95	0.9970	1.0000	1.0000	0.2525	0.3159	0.3742

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
9	STRBP	h-0.95	0.9809	0.9984	0.9999	0.2151	0.2649	0.3138
9	TBC1D13	h-0.95	0.9953	0.9995	1.0000	0.2463	0.2850	0.3239
9	TRPM6	h-0.95	0.9984	1.0000	1.0000	0.2647	0.3209	0.3727
9	ZBTB26	h-0.95	0.9937	0.9998	1.0000	0.2394	0.2991	0.3526
10	IFIT2	l-0.5	0.0002	0.0085	0.1270	-0.1137	-0.0483	0.0254
10	ANKRD2	h-0.5	0.8747	0.9838	0.9991	0.1592	0.2166	0.2709
10	CDNF	h-0.5	0.9584	0.9935	0.9994	0.1939	0.2360	0.2780
10	BMPR1A	h-0.5	0.8985	0.9796	0.9975	0.1673	0.2110	0.2530
10	C10orf70	h-0.5	0.9145	0.9863	0.9989	0.1722	0.2202	0.2691
10	C10orf99	h-0.5	0.8952	0.9784	0.9974	0.1658	0.2098	0.2530
10	CHUK	h-0.5	0.8947	0.9844	0.9990	0.1653	0.2173	0.2697
10	GDF2	h-0.5	0.8063	0.9813	0.9993	0.1428	0.2133	0.2757
10	HECTD2	h-0.5	0.9484	0.9957	0.9999	0.1872	0.2441	0.2992
10	ITGB1	h-0.5	0.8937	0.9778	0.9976	0.1650	0.2092	0.2540
10	KIAA1754	h-0.5	0.8782	0.9786	0.9982	0.1605	0.2098	0.2602
10	PPP3CB	h-0.5	0.9238	0.9923	0.9997	0.1754	0.2327	0.2890
10	REEP3	h-0.5	0.9600	0.9956	0.9998	0.1944	0.2437	0.2926
10	SEPHS1	h-0.5	0.8384	0.9810	0.9992	0.1499	0.2126	0.2729
10	TTC18	h-0.5	0.8960	0.9774	0.9972	0.1660	0.2085	0.2511
10	ECHDC3	l-0.95	0.0000	0.0009	0.0123	-0.1395	-0.0916	-0.0406
10	USP54	l-0.95	0.0000	0.0003	0.0486	-0.1953	-0.1090	-0.0052
10	ADD3	h-0.95	0.9648	0.9979	1.0000	0.1972	0.2573	0.3121
10	CTNNA3	h-0.95	0.9988	0.9999	1.0000	0.2673	0.3114	0.3530
10	ECHS1	h-0.95	0.9660	0.9975	0.9999	0.1983	0.2546	0.3083
10	IPMK	h-0.95	0.9927	0.9997	1.0000	0.2339	0.2876	0.3400
10	OIT3	h-0.95	0.9966	0.9998	1.0000	0.2490	0.2946	0.3391
10	POLR3A	h-0.95	0.9976	1.0000	1.0000	0.2552	0.3211	0.3815
11	PRDX5	l-0.5	0.0002	0.0230	0.3628	-0.1124	-0.0215	0.0759
11	BAD	h-0.5	0.8636	0.9865	0.9994	0.1606	0.2250	0.2827

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
11	C11orf49	h-0.5	0.8937	0.9779	0.9977	0.1696	0.2135	0.2592
11	C11orf56	h-0.5	0.9421	0.9864	0.9983	0.1886	0.2250	0.2633
11	CCS	h-0.5	0.9536	0.9896	0.9983	0.1950	0.2306	0.2647
11	CKAP5	h-0.5	0.9338	0.9890	0.9990	0.1845	0.2295	0.2747
11	FADS3	h-0.5	0.9348	0.9859	0.9980	0.1854	0.2241	0.2624
11	FLJ12529	h-0.5	0.8833	0.9794	0.9981	0.1662	0.2152	0.2637
11	GTF2H1	h-0.5	0.9245	0.9887	0.9991	0.1803	0.2288	0.2756
11	MGC34821	h-0.5	0.8774	0.9786	0.9981	0.1645	0.2144	0.2633
11	NRXN2	h-0.5	0.9228	0.9851	0.9983	0.1798	0.2228	0.2661
11	SART1	h-0.5	0.8403	0.9882	0.9996	0.1548	0.2278	0.2900
11	SDHD	h-0.5	0.9500	0.9981	1.0000	0.1924	0.2637	0.3260
11	SF1	h-0.5	0.9482	0.9906	0.9990	0.1919	0.2328	0.2729
11	SF3B2	h-0.5	0.9418	0.9911	0.9993	0.1883	0.2342	0.2795
11	SIAE	h-0.5	0.9499	0.9943	0.9997	0.1929	0.2433	0.2934
11	SLC43A1	h-0.5	0.9208	0.9863	0.9988	0.1792	0.2247	0.2705
11	SYT7	h-0.5	0.9650	0.9946	0.9996	0.2019	0.2443	0.2873
11	DDB1	h-0.95	1.0000	1.0000	1.0000	0.3472	0.4089	0.4610
11	DKFZP564J0863	h-0.95	0.9754	0.9993	1.0000	0.2105	0.2809	0.3416
11	FADS1	h-0.95	0.9958	0.9995	1.0000	0.2500	0.2868	0.3201
11	FBXL11	h-0.95	0.9935	0.9998	1.0000	0.2406	0.2968	0.3522
11	FLJ20294	h-0.95	0.9689	0.9976	0.9999	0.2052	0.2592	0.3103
11	HRASLS5	h-0.95	0.9878	0.9995	1.0000	0.2271	0.2846	0.3406
11	MGC2574	h-0.95	0.9694	0.9965	0.9998	0.2061	0.2527	0.2988
12	CCDC65	l-0.5	0.0062	0.0243	0.0830	-0.0681	-0.0341	0.0044
12	RAB5B	l-0.5	0.0022	0.0206	0.1205	-0.0915	-0.0387	0.0195
12	BAZ2A	h-0.5	0.9248	0.9887	0.9992	0.1925	0.2472	0.3020
12	C12orf44	h-0.5	0.9647	0.9947	0.9995	0.2167	0.2644	0.3092
12	C12orf51	h-0.5	0.9439	0.9917	0.9993	0.2025	0.2545	0.3048
12	CUTL2	h-0.5	0.9607	0.9944	0.9996	0.2139	0.2633	0.3122

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
12	DPY19L2	h-0.5	0.8293	0.9834	0.9994	0.1603	0.2373	0.3063
12	EP400NL	h-0.5	0.9365	0.9867	0.9984	0.1984	0.2430	0.2880
12	EPS8	h-0.5	0.9156	0.9898	0.9993	0.1883	0.2495	0.3068
12	IFT81	h-0.5	0.9400	0.9850	0.9975	0.2006	0.2399	0.2790
12	KERA	h-0.5	0.9284	0.9831	0.9973	0.1948	0.2368	0.2782
12	KIAA0789	h-0.5	0.9388	0.9844	0.9974	0.1999	0.2389	0.2787
12	LOC196463	h-0.5	0.8520	0.9869	0.9995	0.1665	0.2433	0.3109
12	LYZ	h-0.5	0.8838	0.9856	0.9993	0.1761	0.2410	0.3033
12	MBD6	h-0.5	0.8855	0.9814	0.9986	0.1773	0.2343	0.2910
12	NAP1L1	h-0.5	0.9429	0.9892	0.9989	0.2018	0.2483	0.2944
12	NOL1	h-0.5	0.9249	0.9929	0.9997	0.1923	0.2578	0.3162
12	NR4A1	h-0.5	0.9583	0.9956	0.9997	0.2116	0.2686	0.3207
12	OACT5	h-0.5	0.9479	0.9928	0.9994	0.2048	0.2578	0.3082
12	SLC15A4	h-0.5	0.9033	0.9789	0.9973	0.1834	0.2310	0.2790
12	SLCO1C1	h-0.5	0.9353	0.9838	0.9972	0.1984	0.2378	0.2772
12	SMARCC2	h-0.5	0.8367	0.9758	0.9985	0.1627	0.2273	0.2900
12	UBE2N	h-0.5	0.9420	0.9906	0.9992	0.2014	0.2513	0.3010
12	ULK1	h-0.5	0.9188	0.9853	0.9984	0.1901	0.2405	0.2883
12	ACTR6	h-0.95	0.9832	0.9981	0.9999	0.2378	0.2858	0.3319
12	ANAPC5	h-0.95	0.9906	0.9994	1.0000	0.2514	0.3080	0.3631
12	AQP6	h-0.95	0.9872	0.9983	0.9999	0.2447	0.2882	0.3300
12	C12orf30	h-0.95	0.9764	0.9966	0.9997	0.2285	0.2743	0.3197
12	CART1	h-0.95	0.9881	0.9986	0.9999	0.2464	0.2916	0.3334
12	CEP290	h-0.95	0.9750	0.9969	0.9998	0.2269	0.2763	0.3260
12	CMAS	h-0.95	0.9786	0.9976	0.9999	0.2304	0.2813	0.3307
12	EIF4B	h-0.95	0.9993	1.0000	1.0000	0.3036	0.3599	0.4132
12	GABARAPL1	h-0.95	0.9846	0.9983	0.9999	0.2399	0.2879	0.3336
12	MPHOSPH9	h-0.95	0.9687	0.9962	0.9997	0.2200	0.2720	0.3211
12	PAWR	h-0.95	0.9962	0.9999	1.0000	0.2718	0.3351	0.3930

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
12	SPATS2	h-0.95	0.9999	1.0000	1.0000	0.3465	0.3944	0.4380
12	STRAP	h-0.95	0.9966	0.9999	1.0000	0.2746	0.3368	0.3933
12	WDR66	h-0.95	0.9826	0.9985	0.9999	0.2362	0.2901	0.3448
13	WBP4	l-0.5	0.0008	0.0147	0.1256	-0.1006	-0.0426	0.0212
13	RB1	h-0.5	0.9494	0.9963	0.9999	0.1894	0.2510	0.3053
13	C13orf12	h-0.95	0.9902	0.9991	1.0000	0.2324	0.2771	0.3200
13	FAM48A	h-0.95	0.9972	1.0000	1.0000	0.2557	0.3291	0.3980
13	FBXL3	h-0.95	0.9992	1.0000	1.0000	0.2792	0.3340	0.3856
13	GTF2F2	h-0.95	0.9942	0.9996	1.0000	0.2444	0.2911	0.3377
13	KLF5	h-0.95	0.9993	1.0000	1.0000	0.2817	0.3346	0.3838
13	NDFIP2	h-0.95	0.9984	1.0000	1.0000	0.2685	0.3216	0.3695
13	TGDS	h-0.95	0.9835	0.9983	0.9999	0.2202	0.2661	0.3100
14	C14orf165	l-0.5	0.0001	0.0066	0.1247	-0.1503	-0.0683	0.0226
14	FOS	l-0.5	0.0012	0.0187	0.1340	-0.1041	-0.0414	0.0246
14	C14orf174	h-0.5	0.9462	0.9882	0.9984	0.2094	0.2514	0.2926
14	DLK1	h-0.5	0.9429	0.9921	0.9994	0.2068	0.2611	0.3118
14	DLST	h-0.5	0.9431	0.9890	0.9986	0.2075	0.2531	0.2954
14	GPHN	h-0.5	0.9125	0.9801	0.9974	0.1924	0.2376	0.2848
14	KIAA0423	h-0.5	0.8789	0.9807	0.9985	0.1792	0.2385	0.2965
14	PSEN1	h-0.5	0.8692	0.9765	0.9980	0.1762	0.2332	0.2901
14	RAB2B	h-0.5	0.9103	0.9801	0.9974	0.1917	0.2376	0.2840
14	SEC10L1	h-0.5	0.9293	0.9856	0.9983	0.1999	0.2461	0.2923
14	BRF1	h-0.95	0.9960	0.9996	1.0000	0.2777	0.3227	0.3675
14	EFS	h-0.95	0.9841	0.9975	0.9997	0.2458	0.2863	0.3260
14	IL17E	h-0.95	0.9890	0.9985	0.9999	0.2549	0.2970	0.3367
14	JPH4	h-0.95	0.9972	0.9999	1.0000	0.2839	0.3437	0.3976
14	MTA1	h-0.95	0.9992	1.0000	1.0000	0.3105	0.3607	0.4061
14	RBM23	h-0.95	0.9993	0.9999	1.0000	0.3142	0.3511	0.3843
14	SIX4	h-0.95	0.9705	0.9989	1.0000	0.2264	0.3029	0.3691

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
14	TDP1	h-0.95	0.9675	0.9959	0.9998	0.2245	0.2759	0.3272
15	DYX1C1	h-0.5	0.9427	0.9866	0.9978	0.2258	0.2705	0.3146
15	FURIN	h-0.5	0.9098	0.9795	0.9971	0.2090	0.2584	0.3074
15	HERC2	h-0.5	0.9329	0.9915	0.9994	0.2197	0.2828	0.3389
15	ARPP-19	h-0.5	0.9645	0.9928	0.9990	0.2425	0.2869	0.3301
15	PDIA3	h-0.5	0.9641	0.9923	0.9989	0.2422	0.2854	0.3267
15	PEX11A	h-0.5	0.9113	0.9877	0.9990	0.2085	0.2730	0.3310
15	SLC28A2	h-0.5	0.9498	0.9913	0.9991	0.2300	0.2826	0.3326
15	SNRPN	h-0.5	0.9585	0.9948	0.9997	0.2368	0.2954	0.3536
15	TMEM87A	h-0.5	0.9278	0.9893	0.9991	0.2169	0.2767	0.3334
15	ZNF690	h-0.5	0.9388	0.9757	0.9923	0.2251	0.2533	0.2824
15	ARIH1	h-0.95	0.9877	0.9989	0.9999	0.2728	0.3290	0.3828
15	CDAN1	h-0.95	0.9959	0.9996	1.0000	0.3016	0.3500	0.3959
15	DUOX2	h-0.95	1.0000	1.0000	1.0000	0.3899	0.4480	0.4977
15	FRMD5	h-0.95	0.9892	0.9988	0.9999	0.2784	0.3275	0.3731
15	NIP	h-0.95	0.9729	0.9973	0.9999	0.2507	0.3107	0.3657
15	RBPMS2	h-0.95	0.9911	0.9989	0.9999	0.2832	0.3304	0.3761
15	SLC24A5	h-0.95	0.9757	0.9959	0.9996	0.2545	0.3008	0.3466
15	SPATA5L1	h-0.95	0.9700	0.9995	1.0000	0.2462	0.3471	0.4295
15	TP53BP1	h-0.95	0.9939	0.9992	0.9999	0.2933	0.3369	0.3800
15	TRIP4	h-0.95	0.9866	0.9987	0.9999	0.2710	0.3257	0.3788
16	HAS3	l-0.5	0.0011	0.0091	0.0560	-0.1321	-0.0778	-0.0154
16	ADAT1	h-0.5	0.9233	0.9847	0.9983	0.2271	0.2832	0.3398
16	ARHGAP17	h-0.5	0.8884	0.9775	0.9973	0.2099	0.2710	0.3289
16	C16orf34	h-0.5	0.8907	0.9787	0.9975	0.2115	0.2726	0.3301
16	CCL22	h-0.5	0.8749	0.9819	0.9985	0.2047	0.2782	0.3424
16	FLJ20581	h-0.5	0.9630	0.9931	0.9992	0.2543	0.3059	0.3564
16	LONPL	h-0.5	0.9167	0.9857	0.9984	0.2237	0.2851	0.3405
16	LRRC36	h-0.5	0.9125	0.9859	0.9987	0.2214	0.2854	0.3454

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
16	MGC33367	h-0.5	0.9190	0.9803	0.9968	0.2247	0.2753	0.3238
16	MPFL	h-0.5	0.9211	0.9761	0.9947	0.2263	0.2692	0.3106
16	SPIN1	h-0.5	0.9085	0.9892	0.9994	0.2188	0.2934	0.3623
16	TRAF7	h-0.5	0.8984	0.9771	0.9970	0.2147	0.2706	0.3267
16	ZNF23	h-0.5	0.9333	0.9962	0.9999	0.2322	0.3217	0.3969
16	ABCC12	h-0.95	0.9821	0.9981	0.9999	0.2796	0.3377	0.3919
16	CCL17	h-0.95	0.9877	0.9987	0.9999	0.2904	0.3469	0.3991
16	CORO7	h-0.95	0.9854	0.9986	0.9999	0.2849	0.3454	0.4005
16	CREBBP	h-0.95	0.9904	0.9995	1.0000	0.2973	0.3667	0.4290
16	GABARAPL2	h-0.95	0.9817	0.9983	0.9999	0.2788	0.3404	0.3962
16	GLIS2	h-0.95	0.9931	0.9992	0.9999	0.3074	0.3586	0.4062
16	PLEKHG4	h-0.95	0.9993	1.0000	1.0000	0.3621	0.4125	0.4598
16	POLR3E	h-0.95	0.9665	0.9977	0.9999	0.2579	0.3339	0.4015
16	SLC9A5	h-0.95	0.9974	0.9999	1.0000	0.3318	0.3985	0.4603
17	TUSC5	l-0.5	0.0047	0.0207	0.0685	-0.0761	-0.0376	0.0015
17	ADORA2B	h-0.5	0.9079	0.9800	0.9978	0.2013	0.2512	0.3036
17	CASC3	h-0.5	0.9093	0.9876	0.9991	0.2019	0.2643	0.3230
17	CD300LF	h-0.5	0.9182	0.9817	0.9975	0.2062	0.2535	0.3021
17	CDR2L	h-0.5	0.9264	0.9908	0.9994	0.2094	0.2717	0.3298
17	DDX5	h-0.5	0.8575	0.9949	1.0000	0.1829	0.2859	0.3739
17	ERN1	h-0.5	0.9634	0.9917	0.9988	0.2343	0.2743	0.3163
17	ET	h-0.5	0.9080	0.9885	0.9993	0.2016	0.2662	0.3271
17	GRB2	h-0.5	0.9599	0.9926	0.9992	0.2309	0.2771	0.3224
17	KIAA1618	h-0.5	0.9183	0.9776	0.9960	0.2066	0.2480	0.2901
17	NDEL1	h-0.5	0.8524	0.9774	0.9984	0.1820	0.2477	0.3106
17	NLGN2	h-0.5	0.9421	0.9899	0.9989	0.2189	0.2693	0.3183
17	RSAD1	h-0.5	0.8919	0.9862	0.9990	0.1947	0.2614	0.3193
17	SCARF1	h-0.5	0.9176	0.9853	0.9986	0.2056	0.2597	0.3129
17	TTC25	h-0.5	0.8478	0.9839	0.9992	0.1797	0.2571	0.3250

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
17	ZNF232	h-0.5	0.9295	0.9856	0.9983	0.2115	0.2604	0.3080
17	AATF	h-0.95	0.9977	0.9998	1.0000	0.3051	0.3484	0.3962
17	C17orf64	h-0.95	0.9999	1.0000	1.0000	0.3710	0.4266	0.4791
17	CENTA2	h-0.95	0.9763	0.9973	0.9999	0.2473	0.3002	0.3529
17	CSNK1D	h-0.95	0.9919	0.9995	1.0000	0.2754	0.3355	0.3891
17	DERL2	h-0.95	0.9941	0.9995	1.0000	0.2832	0.3350	0.3831
17	G6PC	h-0.95	0.9675	0.9953	0.9996	0.2367	0.2881	0.3382
17	GNA13	h-0.95	0.9927	0.9995	1.0000	0.2782	0.3348	0.3885
17	ITGAE	h-0.95	0.9968	0.9999	1.0000	0.2965	0.3706	0.4349
17	PRPF8	h-0.95	0.9816	0.9978	0.9999	0.2539	0.3047	0.3557
17	TTC19	h-0.95	0.9934	0.9996	1.0000	0.2813	0.3379	0.3916
17	USP32	h-0.95	0.9955	0.9999	1.0000	0.2885	0.3654	0.4355
17	WDR68	h-0.95	0.9936	0.9996	1.0000	0.2810	0.3392	0.3897
18	ANKRD30B	l-0.5	0.0043	0.0219	0.0782	-0.0497	-0.0194	0.0130
18	C18orf10	l-0.5	0.0001	0.0031	0.0419	-0.1105	-0.0594	-0.0030
18	SERPINB12	l-0.5	0.0008	0.0138	0.1152	-0.0809	-0.0295	0.0253
18	GATA6	h-0.5	0.9591	0.9941	0.9996	0.1882	0.2291	0.2702
18	GNAL	h-0.5	0.8948	0.9777	0.9970	0.1617	0.2019	0.2391
18	KIAA1328	h-0.5	0.9065	0.9869	0.9992	0.1653	0.2128	0.2610
18	ME2	h-0.5	0.8918	0.9802	0.9983	0.1593	0.2045	0.2502
18	KIAA1772	h-0.95	0.9898	0.9997	1.0000	0.2174	0.2765	0.3330
18	PSMA8	h-0.95	0.9796	0.9980	0.9999	0.2043	0.2484	0.2909
18	RTTN	h-0.95	0.9898	0.9995	1.0000	0.2183	0.2688	0.3188
18	TXNDC10	h-0.95	0.9982	1.0000	1.0000	0.2497	0.3032	0.3559
19	FLJ23447	l-0.5	0.0005	0.0130	0.1581	-0.1151	-0.0449	0.0347
19	MYBPC2	l-0.5	0.0073	0.0239	0.0674	-0.0575	-0.0288	0.0017
19	SFRS16	l-0.5	0.0050	0.0195	0.0612	-0.0651	-0.0343	-0.0013
19	ZNF599	l-0.5	0.0018	0.0110	0.0486	-0.0873	-0.0490	-0.0082
19	BPY2IP1	h-0.5	0.9530	0.9955	0.9998	0.2065	0.2650	0.3216

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
19	C19orf25	h-0.5	0.8690	0.9769	0.9980	0.1713	0.2264	0.2813
19	CBLC	h-0.5	0.9506	0.9935	0.9995	0.2049	0.2568	0.3073
19	DDX49	h-0.5	0.8839	0.9773	0.9973	0.1760	0.2269	0.2747
19	EEF2	h-0.5	0.8921	0.9756	0.9969	0.1795	0.2249	0.2717
19	EMR1	h-0.5	0.9506	0.9897	0.9986	0.2059	0.2463	0.2866
19	EPN1	h-0.5	0.9660	0.9949	0.9996	0.2165	0.2622	0.3069
19	FCAR	h-0.5	0.8873	0.9835	0.9987	0.1772	0.2351	0.2895
19	GTF2F1	h-0.5	0.9585	0.9937	0.9994	0.2102	0.2578	0.3025
19	LIM2	h-0.5	0.9221	0.9916	0.9996	0.1906	0.2511	0.3098
19	LOC115098	h-0.5	0.9420	0.9908	0.9992	0.2004	0.2493	0.2969
19	LOC126208	h-0.5	0.9280	0.9912	0.9994	0.1930	0.2501	0.3027
19	MAP4K1	h-0.5	0.9053	0.9799	0.9973	0.1840	0.2300	0.2741
19	MGC11271	h-0.5	0.9626	0.9926	0.9992	0.2137	0.2541	0.2957
19	PGPEP1	h-0.5	0.9147	0.9859	0.9988	0.1873	0.2390	0.2894
19	PIAS4	h-0.5	0.9618	0.9946	0.9996	0.2131	0.2611	0.3074
19	PPP1R15A	h-0.5	0.9009	0.9758	0.9963	0.1824	0.2253	0.2681
19	PRKCSH	h-0.5	0.8978	0.9827	0.9984	0.1808	0.2339	0.2852
19	RASGRP4	h-0.5	0.9242	0.9823	0.9972	0.1918	0.2332	0.2741
19	TNPO2	h-0.5	0.9010	0.9833	0.9986	0.1820	0.2346	0.2871
19	TYROBP	h-0.5	0.6729	0.9752	0.9994	0.1284	0.2245	0.3048
19	ZNF444	h-0.5	0.9335	0.9857	0.9980	0.1960	0.2388	0.2799
19	ZNF560	h-0.5	0.9269	0.9905	0.9994	0.1925	0.2485	0.3039
19	ZNF653	h-0.5	0.9179	0.9932	0.9998	0.1884	0.2560	0.3192
19	ARHGEF1	h-0.95	0.9832	0.9990	1.0000	0.2348	0.2938	0.3495
19	CDC34	h-0.95	0.9784	0.9961	0.9995	0.2290	0.2677	0.3053
19	CNN1	h-0.95	0.9996	1.0000	1.0000	0.3092	0.3651	0.4170
19	FKBP8	h-0.95	0.9974	1.0000	1.0000	0.2755	0.3567	0.4256
19	LOC112703	h-0.95	0.9694	0.9975	0.9999	0.2187	0.2771	0.3310
19	PSMC4	h-0.95	0.9700	0.9961	0.9997	0.2196	0.2678	0.3142

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
19	SAMD4B	h-0.95	0.9939	0.9998	1.0000	0.2580	0.3197	0.3779
19	ZNF440L	h-0.95	0.9952	0.9998	1.0000	0.2639	0.3204	0.3741
19	ZNF93	h-0.95	0.9660	0.9985	1.0000	0.2155	0.2869	0.3506
19	ZNRF4	h-0.95	0.9748	0.9983	0.9999	0.2243	0.2847	0.3394
20	BCAS4	h-0.5	0.9511	0.9871	0.9982	0.2194	0.2588	0.3027
20	CST9	h-0.5	0.9204	0.9826	0.9976	0.2023	0.2507	0.2971
20	DEFB123	h-0.5	0.9249	0.9947	0.9999	0.2038	0.2810	0.3526
20	FLJ33706	h-0.5	0.9489	0.9961	0.9999	0.2175	0.2880	0.3500
20	PDYN	h-0.5	0.9562	0.9901	0.9985	0.2238	0.2653	0.3060
20	RNPC1	h-0.5	0.9103	0.9812	0.9974	0.1979	0.2481	0.2950
20	STK35	h-0.5	0.9651	0.9938	0.9993	0.2313	0.2767	0.3207
20	AHCY	h-0.95	0.9995	1.0000	1.0000	0.3291	0.4079	0.4767
20	BCL2L1	h-0.95	0.9709	0.9941	0.9992	0.2373	0.2781	0.3197
20	C20orf4	h-0.95	0.9998	1.0000	1.0000	0.3469	0.4151	0.4748
20	CBLN4	h-0.95	0.9986	0.9999	1.0000	0.3127	0.3579	0.3995
20	HM13	h-0.95	0.9999	1.0000	1.0000	0.3653	0.4175	0.4648
20	PSMA7	h-0.95	0.9946	0.9994	1.0000	0.2818	0.3277	0.3707
20	SRMS	h-0.95	0.9688	0.9952	0.9996	0.2337	0.2834	0.3308
20	TPX2	h-0.95	0.9697	0.9956	0.9997	0.2356	0.2848	0.3349
21	BRWD1	l-0.5	0.0016	0.0211	0.1346	-0.0542	-0.0123	0.0316
21	CHODL	h-0.5	0.7998	0.9759	0.9990	0.1226	0.1753	0.2261
21	NDUFV3	h-0.5	0.9511	0.9941	0.9997	0.1615	0.2003	0.2384
21	USP16	h-0.5	0.8572	0.9769	0.9984	0.1334	0.1761	0.2187
21	C21orf33	h-0.95	0.9733	0.9976	0.9999	0.1743	0.2142	0.2534
21	DSCR8	h-0.95	0.9715	0.9981	1.0000	0.1715	0.2174	0.2606
21	MRAP	h-0.95	0.9902	0.9994	1.0000	0.1914	0.2332	0.2736
22	PDGFB	l-0.5	0.0049	0.0232	0.0820	-0.0823	-0.0425	-0.0000
22	ADRBK2	h-0.5	0.9624	0.9939	0.9994	0.2303	0.2791	0.3269
22	CARD10	h-0.5	0.9206	0.9815	0.9969	0.2042	0.2501	0.2928

Continued on next page

TABLE S5 – continued from previous page

Chrom.	Gene	Class.	Quant. (lb)	Quant. (median)	Quant. (ub)	ϕ_{ST} (lb)	ϕ_{ST} (median)	ϕ_{ST} (ub)
22	FAM83F	h-0.5	0.8972	0.9915	0.9997	0.1924	0.2711	0.3406
22	LIF	h-0.5	0.7590	0.9832	0.9995	0.1523	0.2531	0.3337
22	ZNF278	h-0.5	0.9363	0.9899	0.9992	0.2118	0.2670	0.3202
22	FLJ10945	h-0.95	0.9759	0.9956	0.9995	0.2442	0.2871	0.3283
22	FLJ20699	h-0.95	0.9802	0.9994	1.0000	0.2476	0.3275	0.3993
22	FLJ27365	h-0.95	0.9739	0.9937	0.9990	0.2419	0.2787	0.3157
22	MMP11	h-0.95	0.9848	0.9986	0.9999	0.2565	0.3119	0.3625
22	PKDREJ	h-0.95	1.0000	1.0000	1.0000	0.3964	0.4547	0.5044
22	ZBED4	h-0.95	0.9974	0.9998	1.0000	0.3005	0.3498	0.3996
X	CRSP2	h-0.5	0.9387	0.9837	0.9971	0.2888	0.3411	0.3935
X	EDA2R	h-0.5	0.9130	0.9907	0.9996	0.2697	0.3607	0.4439
X	FLJ20298	h-0.5	0.8873	0.9848	0.9990	0.2563	0.3435	0.4233
X	HEPH	h-0.5	0.9445	0.9910	0.9991	0.2930	0.3618	0.4247
X	IGBP1	h-0.5	0.9262	0.9779	0.9951	0.2806	0.3297	0.3778
X	ITIH5L	h-0.5	0.9379	0.9912	0.9993	0.2863	0.3625	0.4313
X	LOC158957	h-0.5	0.9322	0.9817	0.9967	0.2833	0.3369	0.3886
X	NRK	h-0.5	0.8801	0.9806	0.9981	0.2524	0.3348	0.4065
X	PRRG1	h-0.5	0.9661	0.9961	0.9998	0.3144	0.3877	0.4564
X	AR	h-0.95	0.9983	0.9998	1.0000	0.4152	0.4645	0.5098
X	GNL3L	h-0.95	0.9762	0.9980	0.9999	0.3276	0.4068	0.4786
X	GPKOW	h-0.95	0.9983	1.0000	1.0000	0.4117	0.4910	0.5563
X	MSN	h-0.95	0.9834	0.9985	0.9999	0.3410	0.4138	0.4804
X	PHKA1	h-0.95	0.9713	0.9954	0.9995	0.3207	0.3828	0.4396
X	RPL10	h-0.95	0.9726	0.9957	0.9996	0.3227	0.3850	0.4414
X	TSC22D3	h-0.95	0.9724	0.9968	0.9998	0.3217	0.3930	0.4590