

TABLE S3**Total number of imputed genotypes in mouse HapMap**

Strain name	# imputed genotypes		Miscoverage of shared segments		Imputation error using WTCHG SNPs	
	overall	High-confidence	16 strains	12 strains	overall	High-confidence
129P2/OlaHsd	8,245,441	7,230,952	0.00059	0.00059	0.00335	0.00094
129S2/SvHsd	8,244,722	7,307,195	0.00000	0.00000		
129S4/SvJac	8,245,906	7,314,437	0.00000	0.00000		
129S6/SvEv	8,234,178	7,223,744	0.00000	0.00000		
129T2/SvEms	8,243,699	7,224,079	0.00000	0.00000		
129X1/SvJ	8,225,454	7,140,392	0.00059	0.00059	0.00602	0.00104
B6A6ESlineRegeneron	8,245,745	8,230,951	0.00000	0.00000		
BALB/cJ	8,235,566	7,184,094	0.00000	0.00000	0.02036	0.00019
BPH/2J	8,228,527	6,977,701	0.00000	0.00000	0.01104	0.00187
BPL/1J	8,232,603	6,906,869	0.00117	0.00117	0.01430	0.00286
BPN/3J	8,237,827	6,900,403	0.00351	0.00351	0.01548	0.00250
BUB/BnJ	8,226,291	6,305,478	0.01992	0.01992	0.02731	0.00454
C2T1ESlineNagy	8,245,903	8,229,596	0.00000	0.00000		
C3HeB/FeJ	8,233,065	7,207,943	0.00000	0.00000	0.00065	0.00037
C57BL/10J	8,233,995	7,948,029	0.00000	0.00000	0.00964	0.00597
C57BL/6ByJ	8,247,008	8,231,062	0.00000	0.00000		
C57BL/6JBomTac	8,248,037	8,239,698	0.00000	0.00000		
C57BL/6JCrI	8,243,609	8,237,257	0.00000	0.00000		
C57BL/6JOlaHsd	8,244,352	8,236,971	0.00000	0.00000		
C57BL/6NCrl	8,244,887	8,229,351	0.00000	0.00000		
C57BL/6NHsd	8,244,020	8,227,807	0.00000	0.00000		
C57BL/6NJ	8,244,963	8,230,202	0.00000	0.00000		
C57BL/6NNIH	8,244,167	8,229,485	0.00000	0.00000		
C57BL/6NTac	8,245,953	8,229,946	0.00000	0.00000		
C57BLKS/J	8,236,725	7,723,976	0.00000	0.00000		
C57BR/cdJ	8,226,716	6,965,038	0.04277	0.09080	0.02635	0.00428
C57L/J	8,227,549	6,916,320	0.04277	0.09080	0.02599	0.00459
C58/J	8,225,696	6,862,822	0.05214	0.11834	0.02523	0.00490
CALB/RkJ	8,244,873	0	0.39602	0.56298	0.13004	N/A
CBA/J	8,227,287	6,945,743	0.00000	0.00000	0.01009	0.00251
CE/J	8,228,150	5,251,341	0.13064	0.19215	0.06007	0.00749
CZECHII/EjJ	8,246,104	0	0.00293	0.78617		
DBA/1J	8,226,067	7,027,623	0.00000	0.00000	0.00787	0.00201
DDK/Pas	8,244,842	6,053,745	0.08436	0.08494		
DDY/JclSidSeyFrkJ	8,236,772	6,303,940	0.06503	0.06503	0.02930	0.00333
EL/SuzSeyFrkJ	8,235,603	6,258,752	0.03866	0.03866	0.02807	0.00482

Fline	8,250,432	5,967,688	0.04218	0.04218		
HTG/GoSfSnJ	8,245,769	7,297,844	0.00000	0.00000		
I/LnJ	8,227,162	6,046,611	0.07967	0.10486	0.03574	0.00429
ILS	8,233,633	6,890,084	0.00000	0.00000	0.01324	0.00148
IS/CamRkJ	8,236,630	0	0.26889	0.47686	0.14918	N/A
ISS	8,233,475	6,867,012	0.00996	0.00996	0.01806	0.00282
JF1/Ms	8,246,764	5,444,331	0.00000	0.78676		
LEWES/Eij	8,235,345	977,677	0.21324	0.44757	0.16626	0.00919
LG/J	8,227,062	6,128,027	0.00996	0.00996	0.03319	0.00534
LP/J	8,226,598	7,029,170	0.00059	0.00059	0.00806	0.00182
Lline	8,249,621	5,957,733	0.08260	0.08260		
MA/MyJ	8,226,967	6,300,478	0.04511	0.06503	0.03063	0.00495
MAI/Pas	8,253,960	0	0.00059	0.79262		
MOLG/DnJ	8,244,056	6,351,851	0.00000	0.87756		
MRL/MpJ	8,230,636	6,454,050	0.01054	0.01054	0.02311	0.00397
MSM/Ms	8,238,358	5,577,646	0.00059	0.78676	0.04643	0.01150
NON/LtJ	8,229,599	6,349,568	0.05858	0.05858	0.02463	0.00334
NOR/LtJ	8,242,454	7,316,242	0.00000	0.00000	0.00241	0.00038
NZB/B1NJ	8,239,399	5,965,759	0.09315	0.09315		
NZL/LtJ	8,246,177	6,081,332	0.10076	0.10896		
NZO/HILtJ	8,234,925	6,156,349	0.11013	0.11775	0.03378	0.00537
O20	8,247,518	5,736,937	0.09022	0.10076		
P/J	8,239,416	6,119,956	0.00000	0.00000	0.03595	0.00588
PERA/Eij	8,231,368	0	0.42004	0.64968	0.14189	N/A
PERC/Eij	8,229,729	0	0.40949	0.59930	0.20895	N/A
PL/J	8,225,812	6,415,946	0.05858	0.05858	0.02221	0.00411
PWK/PhJ	8,242,952	6,370,734	0.00000	0.78735	0.16018	0.04412
Qsi5	8,246,243	6,202,186	0.00879	0.00879		
RBA/DnJ	8,229,526	2,318,943	0.17047	0.28881	0.11836	0.00834
RF/J	8,239,999	6,532,284	0.00000	0.00000	0.02189	0.00373
RHIS/J	8,226,755	5,802,294	0.02636	0.02636	0.04037	0.00483
SEA/GnJ	8,227,130	6,637,917	0.00410	0.00410	0.02021	0.00285
SEG/Pas	8,267,796	0	0.51787	1.00000		
SJL/J	8,226,610	6,344,651	0.01875	0.01875	0.02377	0.00350
SKIVE/Eij	8,242,754	0	0.00293	0.79262	0.10861	N/A
SM/J	8,235,831	5,511,067	0.01465	0.03281	0.05459	0.00757
SOD1/Eij	8,241,898	0	0.20152	0.27651		
SPRET/Eij	8,254,823	0	0.40773	1.00000	0.15051	N/A
ST/bj	8,233,413	6,021,016	0.04159	0.04159	0.03758	0.00670
SWR/J	8,226,433	6,051,249	0.02695	0.02695	0.03176	0.00454
TALLYHO/JngJ	8,238,580	5,872,209	0.02519	0.05682		
ZALENDE/Eij	8,241,228	0	0.29525	0.48975	0.18275	N/A
Total (or Avg.)	642,567,138	446,829,783	0.06087	0.16907	0.04859	0.00374

Total number of imputed genotypes missing in NIEHS/Perlegen SNPs, mouse HapMap SNPs, WTCHG SNPs, and the gap-filling NIEHS/Perlegen SNPs, in addition to the coverage of shared segments and the imputation errors over 78 non-resequenced strains