

Table S30. Fraction of local heritability observed in simulation (normal allelic effect sizes, imputed SNPs tested).

Low-frequency un-typed causal variants:										
# casuals	h^2_{GWAS}	$h^2_{\text{GWAS,joint}}$	Gain	h^2_{g}	Gain	h^2_{gLD}	Gain	h^2_{gLDAK}	Gain	$P(h^2_{\text{gLD}} \text{ vs. } h^2_{\text{gLDAK}})$
1	1.01	1.04 (0.03)	1.03	0.65 (0.07)	0.64	1.11 (0.11)	1.10	0.89 (0.08)	0.88	1.2×10^{-01}
2	0.82	0.86 (0.03)	1.05	0.58 (0.06)	0.70	1.00 (0.10)	1.22	1.03 (0.07)	1.26	8.1×10^{-01}
3	0.71	0.68 (0.03)	0.96	0.57 (0.05)	0.80	1.00 (0.11)	1.41	0.94 (0.09)	1.33	7.0×10^{-01}
5	0.56	0.60 (0.03)	1.07	0.69 (0.06)	1.23	0.74 (0.10)	1.33	1.02 (0.08)	1.82	3.2×10^{-02}
10	0.38	0.47 (0.03)	1.24	0.71 (0.07)	1.88	0.93 (0.11)	2.46	0.92 (0.10)	2.42	9.2×10^{-01}
Average	0.70	0.73 (0.10)	1.04	0.64 (0.10)	0.91	0.96 (0.10)	1.37	0.96 (0.10)	1.37	
Common un-typed causal variants:										
# casuals	h^2_{GWAS}	$h^2_{\text{GWAS,joint}}$	Gain	h^2_{g}	Gain	h^2_{gLD}	Gain	h^2_{gLDAK}	Gain	$P(h^2_{\text{gLD}} \text{ vs. } h^2_{\text{gLDAK}})$
1	1.00	1.00 (0.03)	1.00	0.70 (0.07)	0.70	0.88 (0.11)	0.88	1.00 (0.10)	1.00	4.5×10^{-01}
2	0.82	0.81 (0.03)	0.98	0.71 (0.06)	0.86	0.88 (0.11)	1.07	0.98 (0.09)	1.20	4.6×10^{-01}
3	0.71	0.74 (0.03)	1.05	0.65 (0.06)	0.91	0.90 (0.09)	1.27	0.99 (0.09)	1.39	4.9×10^{-01}
5	0.56	0.64 (0.02)	1.14	0.74 (0.06)	1.33	0.77 (0.11)	1.38	0.97 (0.07)	1.74	1.1×10^{-01}
10	0.37	0.45 (0.02)	1.21	0.77 (0.05)	2.07	0.87 (0.09)	2.35	1.00 (0.09)	2.70	3.1×10^{-01}
Average	0.69	0.73 (0.09)	1.05	0.71 (0.09)	1.03	0.86 (0.09)	1.25	0.99 (0.09)	1.43	