

**Table S2. Breakdown of sample and markers in GWAS**

		SNPs and individuals genotyped	SNPs and individuals removed due to low call rate (<95%)	SNPs removed due to low MAF (<0.05)	SNP removed due to deviation from HWE (p<1e-06%)	Individuals removed due to FDR**<1%	Individuals removed due to IBS*** >=0.95	Individuals removed due to trait or covariate missing	<b>Final nr. of SNPs and individuals in GWAS analyses - 3, 4, 5 groups analyses</b>	Final nr. of SNPs and individuals in GWAS analyses - cases vs controls
GSD	markers	173662	10298	70127	7355	-	-	-	<b>88704 (51%)</b>	88704
	dogs	516	14	-	-	1	6	0	<b>496</b>	262
GR	markers	174376	4021	66538	4719	-	-	-	<b>100680 (58%)</b>	100680
	dogs	187	0	-	-	-	2	58	<b>129</b>	73
LR	markers	174376	3197	54937	4794	-	-	-	<b>112428 (64%)</b>	112428
	dogs	141*	0	-	-	0	0	13	<b>128</b>	69
SP	markers	173662	9631	55678	3116	-	-	-	<b>106622 (61%)</b>	106622
	dogs	96	2	-	-	1	0	0	<b>94</b>	53

\*Out of 302 genotyped individuals 141 were analyzed for IgA, thus only these were included in the QC

\*\*Too high autosomal heterozygosity

\*\*\*Mean IBS based on 2000 autosomal markers

Note: SNPs and individuals left may be higher than the subtraction due to group overlap between exclusion criteria