

Table S10. All GRAIL pathways from GWAS all breeds.

Region_id	Region	uncorr p-value	Genes	'pyruvate'	'lyase'	'oocyte'	'cycloxygenase'	'prion'	'dermatitis'	'serum'	'insulin'	'atopic'	'matrix'	'ovarian'	'pregnancy'	'carcinoma'	'metalloproteinase'	'gastric'	'complement'	'oocytes'	'igfbp'	'invasion'	'sialic'	
<b>GERMAN SHEPHERD</b>																								
ggsd6	chr8:63211755-63827575	0.098656727	GSC			X	X								X		X			X		X		
		0.13423564	SERPINA1					X	X			X	X	X	X	X	X	X	X	X			X	
		0.064372074	SERPINA3					X	X				X				X		X	X		X	X	
		0.17150907	SERPINA4							X							X						X	
		0.18869457	SERPINA6							X	X				X	X			X					
		0.036794515	SERPINA9											X										
		0.018702784	SERPINA12										X		X									
ggsd7	chr10:69072184-69174348	0.12005742	FIGLA						X	X		X							X					
ggsd11	chr23:48439474-48539474	0.0018217369	GPR149										X											
ggsd12	chr27:37248047-37454652	0.014281463	C3AR1						X	X	X				X		X		X	X				
		0.15884016	SLC2A3	X	X						X				X	X					X			
ggsd13	chr5:29188112-29288253	0.17901195	MMP7				X	X	X	X				X	X	X								
		0.18210673	TMEM123																				X	
<b>GOLDEN RETRIEVER</b>																								
ggr1	chr6:18011946-18112312	0.048060378	ALDOA	X															X					
		0.12208519	TBX6								X													
ggr3	chr26:7114611-7846707	0.14609796	DIABLO	X										X		X		X		X				
		0.005586012	IL31					X	X		X	X				X								
ggr5	chr29:10808328-11803162	0.16904554	CLVS1 / RLBP1L1														X							
<b>SHAR PEI</b>																								
gsp1	chr28:10446800-13077479	0.075472269	MORN4 / C10orf83																X					
		0.01325097	HOGA1 / C10orf65/NPL2	X					X															
		0.16391053	CHUK								X			X	X	X							X	
		0.10485278	CPN1						X				X						X					
		0.10924305	HPSE2									X				X		X		X		X		X
		0.10265851	NKX2-3						X	X										X				
		0.17215797	SFRP5									X	X	X	X	X	X		X			X		
gsp10	chr7:19623829-19723829	0.049370844	PTGS2		X	X		X		X	X	X	X	X	X	X	X	X			X	X		
gsp11	chr7:22714328-22814328	0.14052058	ASTN1						X															
		0.070564932	PAPPA2						X	X		X				X	X		X	X		X		
gsp8	chr7:16146250-16246197	0.16958668	DHX9											X					X					
		0.035098271	NPL	X																				
<b>SUM GENES</b>				3	1	3	2	2	3	14	9	3	10	7	11	12	6	8	10	6	2	9	1	
<b>SUM REGIONS</b>				3	1	3	2	2	3	8	7	3	7	6	5	7	5	5	7	5	2	5	1	