

Genome-wide association studies for production, respiratory disease, and immune-related traits in Landrace pigs

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Supplementary table

Table S3. Significant gene ontology (GO) terms and Kyoto Encyclopedia of Genes and Genomes (KEGG) pathways associated with production and immune-related traits (p -value < 0.05).

Table S3. Significant gene ontology (GO) terms and Kyoto Encyclopedia of Genes and Genomes (KEGG) pathways associated with production and immune-related traits (p -value < 0.05)

Traits ^a	Database	Term ID	Term description	Counts	Involved genes	DAVID p -value
Production traits						
TDG	GO	GO:0045893	Positive regulation of transcription, DNA-templated	5	MAP2K3, RAI1, USP22, TNNT2, SOX7	5.71E-03
	GO	GO:0015629	Actin cytoskeleton	3	MSRA, MPRIP, LSP1	3.57E-02
	GO	GO:0003779	Actin binding	4	MPRIP, TNNT3, TNNT2, LSP1	7.77E-03
BF	GO	GO:0010951	Negative regulation of endopeptidase activity	3	SERPINB12, SERPINB13, SERPINB5	8.99E-03
	GO	GO:0004867	Serine-type endopeptidase inhibitor activity	3	SERPINB12, SERPINB13, SERPINB5	5.24E-03
	GO	GO:0002020	Protease binding	3	SERPINB13, MBP, MALT1	5.67E-03
Immune-related traits						
WBC_105	GO	GO:0042826	Histone deacetylase binding	3	MEF2B, AKAP8L, AKAP8	1.59E-02
	GO	GO:0044822	Poly(A) RNA binding	7	BST2, UPF1, DDX49, AKAP8L, CCDC124, AKAP8, SUGP2	1.79E-02
RGL_105	GO	GO:0005829	Cytosol	6	NCF2, GMNN, ACOT13, ARPC5, RGL1, SMG7	6.82E-03
CORT_105	GO	GO:0010951	Negative regulation of endopeptidase activity	6	SERPINA11, SERPINA12, SERPINA1, SERPINA6, SERPINA4, SERPINA5	3.40E-08
	GO	GO:0005615	Extracellular space	6	SERPINA11, SERPINA12, SERPINA1, SERPINA6, SERPINA4, SERPINA5	2.49E-03
	GO	GO:0004867	Serine-type endopeptidase inhibitor activity	6	SERPINA11, SERPINA12, SERPINA1, SERPINA6, SERPINA4, SERPINA5	7.00E-09
IFN- γ	GO	GO:0061337	Cardiac conduction	3	CACNG1, CACNG4, CACNG5	4.20E-05
	GO	GO:0070588	Calcium ion transmembrane transport	3	CACNG1, CACNG4, CACNG5	2.96E-04
	GO	GO:0006810	Transport	3	CACNG1, CACNG4, CACNG5	2.50E-03
	GO	GO:0005245	Voltage-gated calcium channel activity	3	CACNG1, CACNG4, CACNG5	5.45E-05
	KEGG	hsa04010	MAPK signaling pathway	4	CACNG1, CACNG4, CACNG5, MAP2K6	1.91E-04
	KEGG	hsa05412	Arrhythmogenic right ventricular cardiomyopathy (ARVC)	3	CACNG1, CACNG4, CACNG5	5.54E-04
	KEGG	hsa04260	Cardiac muscle contraction	3	CACNG1, CACNG4, CACNG5	6.94E-04
	KEGG	hsa05410	Hypertrophic cardiomyopathy (HCM)	3	CACNG1, CACNG4, CACNG5	7.50E-04
TNF- α	KEGG	hsa05414	Dilated cardiomyopathy	3	CACNG1, CACNG4, CACNG5	8.70E-04
	KEGG	hsa04261	Adrenergic signaling in cardiomyocytes	3	CACNG1, CACNG4, CACNG5	2.33E-03
	KEGG	hsa04921	Oxytocin signaling pathway	3	CACNG1, CACNG4, CACNG5	2.75E-03
	GO	GO:0044822	Poly(A) RNA binding	3	LARP1, GEMIN5, MRPL22	2.45E-02
Multi-trait meta-analysis						
	GO	GO:0010951	Negative regulation of endopeptidase activity	5	SERPINA11, BST2, SERPINA12, SERPINA1, SERPINA6	5.30E-05
	GO	GO:0006914	Autophagy	3	MAP1S, MVB12A, CTSD	2.20E-02
	GO	GO:0004867	Serine-type endopeptidase inhibitor activity	4	SERPINA11, SERPINA12, SERPINA1, SERPINA6	4.87E-04

^aAbbreviations of traits are shown in Table 2.