

GEPHE SUMMARY

	Gephebase Gene		GepheID
Vertnin (VRTN) [possibly a pseudo-replicate of other Pig entry] (<a +vertnin+(vrtn)+[possibly+a+pseudo-replicate+of+other+pig+entry]"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=">https://www.gephebase.org/search-criteria?/and+Gene+Gephebase="+Vertnin+(VRTN)+[possibly+a+pseudo-replicate+of+other+Pig+entry]"#gephebase-summary-title)		GP00001166	
	Entry Status	Martin	Main curator
Published			

PHENOTYPIC CHANGE

	Trait Category		
Morphology (<a +morphology+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Trait+Category=">https://www.gephebase.org/search-criteria?/and+Trait+Category="+Morphology+"#gephebase-summary-title)			
	Trait		
Vertebrae number (<a +vertebrae+number+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Trait=">https://www.gephebase.org/search-criteria?/and+Trait="+Vertebrae+number+"#gephebase-summary-title)			
	Trait State in Taxon A		
Sus scrofa - White Duroc			
	Trait State in Taxon B		
Sus scrofa- Erhualian			
	Ancestral State		
Data not curated			
	Taxonomic Status		
Domesticated (<a +domesticated+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=">https://www.gephebase.org/search-criteria?/and+Taxonomic+Status="+Domesticated+"#gephebase-summary-title)			
	Taxon A		Taxon B
	Latin Name		Latin Name
Sus scrofa (<a +sus+scrofa+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms="+Sus+scrofa+"#gephebase-summary-title)		Sus scrofa domesticus (<a +sus+scrofa+domesticus+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms="+Sus+scrofa+domesticus+"#gephebase-summary-title)	
	Common Name		Common Name
pig		domestic pig	
	Synonyms		Synonyms
pig; pigs; swine; wild boar; Sus scrofa Linnaeus, 1758; Sus scrofus		Sus domestica; Sus domesticus; Sus scrofa domestica; domestic pig	
	Rank		Rank
species		subspecies	
	Lineage		Lineage
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Boreoeutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae; Sus		cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Boreoeutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae; Sus; Sus scrofa	
	Parent		Parent
Sus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9822)		Sus scrofa (pig) - (Rank: species) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9823)	
	NCBI Taxonomy ID		NCBI Taxonomy ID
9823 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9823)		9825 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9825)	
	is Taxon A an Intraspecies?		is Taxon B an Intraspecies?
No		Yes	
			Taxon B Description
		Sus scrofa- Erhualian	

GENOTYPIC CHANGE

	Generic Gene Name		UniProtKB Mus musculus
Vrtn		Q3SYK4 (http://www.uniprot.org/uniprot/Q3SYK4)	
	Synonyms		GenebankID or UniProtKB
7420416P09Rik		BAJ11938 (https://www.ncbi.nlm.nih.gov/nucore/BAJ11938)	
	String		
10090.ENSMUSP00000093207 (http://string-db.org/newstring.cgi/show_network_section.pl?identifier=10090.ENSMUSP00000093207)			
	Sequence Similarities		
Belongs to the vertnin family.			
	GO - Molecular Function		
-			
	GO - Biological Process		
-			
	GO - Cellular Component		

-	Presumptive Null
Unknown (https://www.gephebase.org/search-criteria?/and+Presumptive Null=~Unknown^#gephebase-summary-title)	
	Molecular Type
Unknown (https://www.gephebase.org/search-criteria?/and+Molecular Type=~Unknown^#gephebase-summary-title)	
	Aberration Type
Unknown (https://www.gephebase.org/search-criteria?/and+Aberration Type=~Unknown^#gephebase-summary-title)	
unknown	Molecular Details of the Mutation
	Experimental Evidence
Linkage Mapping (https://www.gephebase.org/search-criteria?/and+Experimental Evidence=~Linkage Mapping^#gephebase-summary-title)	
	Main Reference
Mapping and fine mapping of quantitative trait loci for the number of vertebrae in a White Duroc × Chinese Erhualian intercross resource population. (2012) (https://pubmed.ncbi.nlm.nih.gov/22497517)	
	Authors
Ren DR; Ren J; Ruan GF; Guo YM; Wu LH; Yang GC; Zhou LH; Li L; Zhang ZY; Huang LS	
	Abstract
The number of vertebrae is associated with body size and meat production in pigs. To identify quantitative trait loci (QTL) for the number of vertebrae, phenotypic values were measured in 1029 individuals from a White Duroc × Chinese Erhualian intercross F(2) population. A whole genome scan was performed with 194 microsatellite markers in the F(2) population. Four genome-wide significant QTL and eight chromosome-wide significant QTL for the number of vertebrae were identified on pig chromosomes (SSC) 1, 2, 6, 7, 10 and 12. The most significant QTL was detected on SSC7 with a confidence interval of 1 cM, explaining 42.32% of the phenotypic variance in the thoracic vertebral number. The significant QTL on SSC1, 2 and 7 confirmed previous reports. A panel of 276 animals representing seven Western and Chinese breeds was genotyped with 34 microsatellite markers in the SSC7 QTL region. No obvious selective sweep effect was observed in the tested breeds, indicating that intensive selection for enlarged body size in Western commercial breeds did not wipe out the genetic variability in the QTL region. The Q alleles for increased vertebral number originated from both Chinese Erhualian and White Duroc founder animals. A haplotype block of approximately 900 kb was found to be shared by all Q-bearing chromosomes of F(1) sires except for one distinct Q chromosome. The critical region harbours the newly reported VRTN gene associated with vertebral number. Further investigations are required to confirm whether VRTN or two other positional candidate genes, PROX2 and FOS, cause the QTL effect.	
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	Additional References

RELATED GEPHE

	Related Genes
2 (GCNF (NR6A1), Vertnin (VRTN)) (https://www.gephebase.org/search-criteria?/or+Taxon ID=~9823^/and+Trait=Vertebrae number/or+Taxon ID=~9825^/and+Trait=Vertebrae number/and+groupHaplotypes=true#gephebase-summary-title)	
No matches found.	Related Haplotypes

EXTERNAL LINKS

COMMENTS