

GEPHE SUMMARY

DCAF17 (https://www.gephebase.org/search-criteria/?and+Gene Gephebase=DCAF17">#gephebase-summary-title)	Gephebase Gene	GP00001570	GephelD
	Entry Status	Prigent	Main curator
Published			

PHENOTYPIC CHANGE

	Trait Category
Physiology (https://www.gephebase.org/search-criteria/?and+Trait Category=^Physiology^#gephebase-summary-title)	Trait
Hair Length (https://www.gephebase.org/search-criteria/?and+Trait=^Hair Length^#gephebase-summary-title)	Trait State in Taxon A
Pig breed from Northern China with long dense hair	Trait State in Taxon B
Pig breed from Southern China with sparse short hair	Ancestral State
Taxon A	Taxonomic Status

	Taxon A	Taxon B
Sus scrofa (#gephebase-summary-title")	Latin Name	Latin Name
pig	Common Name	Common Name
pig; pigs; swine; wild boar; Sus scrofa Linnaeus, 1758; Sus scrofus	Synonyms	Synonyms
species	Rank	Rank
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	Lineage	Lineage
Sus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9822)	Parent	Parent
9823 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9823)	NCBI Taxonomy ID	NCBI Taxonomy ID
Yes	is Taxon A an Infraspecies?	is Taxon B an Infraspecies?
Pig breed from Northern China with long dense hair	Taxon A Description	Taxon B Description

GENOTYPIC CHANGE

DCAF17	Generic Gene Name	UniProtKB Sus scrofa
-	Synonyms	GenebankID or UniProtKB
9823.ENSSCP00000026329 (http://string-db.org/newstring_cgi/show_network_section.pl?identifier=9823.ENSSCP00000026329)	String	
-	Sequence Similarities	
-	GO - Molecular Function	
-	GO - Biological Process	
GO:0016567 : protein ubiquitination (https://www.ebi.ac.uk/QuickGO/term/GO:0016567)		
GO - Cellular Component		
GO:0005829 : cytosol (https://www.ebi.ac.uk/QuickGO/term/GO:0005829)		

GO:0005654 : nucleoplasm (<https://www.ebi.ac.uk/QuickGO/term/GO:0005654>)

GO:0080008 : Cul4-RING E3 ubiquitin ligase complex

(<https://www.ebi.ac.uk/QuickGO/term/GO:0080008>)

Presumptive Null

No (<https://www.gephebase.org/search-criteria?/and+Presumptive+Null=%No%#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>)

Molecular Details of the Mutation

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Experimental Evidence

Association Mapping (<https://www.gephebase.org/search-criteria?/and+Experimental+Evidence=%Association+Mapping%#gephebase-summary-title>)

Main Reference

Adaptation and possible ancient interspecies introgression in pigs identified by whole-genome sequencing. (2015) (<https://pubmed.ncbi.nlm.nih.gov/25621459>)

Authors

Ai H; Fang X; Yang B; Huang Z; Chen H; Mao L; Zhang F; Zhang L; Cui L; He W; Yang J; Yao X; Zhou L; Han L; Li J; Sun S; Xie X; Lai B; Su Y; Lu Y; Yang H; Huang T; Deng W; Nielsen R; Ren J; Huang L

Abstract

Domestic pigs have evolved genetic adaptations to their local environmental conditions, such as cold and hot climates. We sequenced the genomes of 69 pigs from 15 geographically divergent locations in China and detected 41 million variants, of which 21 million were absent from the dbSNP database. In a genome-wide scan, we identified a set of loci that likely have a role in regional adaptations to high- and low-latitude environments within China. Intriguingly, we found an exceptionally large (14-Mb) region with a low recombination rate on the X chromosome that appears to have two distinct haplotypes in the high- and low-latitude populations, possibly underlying their adaptation to cold and hot environments, respectively. Surprisingly, the adaptive sweep in the high-latitude regions has acted on DNA that might have been introgressed from an extinct *Sus* species. Our findings provide new insights into the evolutionary history of pigs and the role of introgression in adaptation.

Additional References

RELATED GEPHE

Related Genes

No matches found.

Related Haplotypes

No matches found.

EXTERNAL LINKS

COMMENTS