

GEPHE SUMMARY

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

PHENOTYPIC CHANGE

Physiology (https://www.gephebase.org/search-criteria?/and+Trait+Category=Physiology#gephebase-summary-title)	Trait Category		
Hair Length (https://www.gephebase.org/search-criteria?/and+Trait=Hair+Length#gephebase-summary-title)	Trait		
Pig breed from Northern China with long dense hair	Trait State in Taxon A		
Pig breed from Southern China with sparse short hair	Trait State in Taxon B		
Taxon A	Ancestral State		
Domesticated (https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=Domesticated#gephebase-summary-title)	Taxonomic Status		
	Taxon A	Taxon B	
Sus scrofa (https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Sus+scrofa#gephebase-summary-title)	Latin Name	Sus scrofa (https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Sus+scrofa#gephebase-summary-title)	Latin Name
pig	Common Name	pig	Common Name
pig; pigs; swine; wild boar; Sus scrofa Linnaeus, 1758; Sus scrofa species	Synonyms	pig; pigs; swine; wild boar; Sus scrofa Linnaeus, 1758; Sus scrofa species	Synonyms
	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	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
Sus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9822)	Parent	Sus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9822)	Parent
9823 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9823)	NCBI Taxonomy ID	9823 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9823)	NCBI Taxonomy ID
Yes	is Taxon A an Intraspecies?	Yes	is Taxon B an Intraspecies?
Pig breed from Northern China with long dense hair	Taxon A Description	Pig breed from Southern China with sparse short hair	Taxon B Description

GENOTYPIC CHANGE

DCAF17	Generic Gene Name	I3LQF0 (http://www.uniprot.org/uniprot/I3LQF0)	UniProtKB Sus scrofa
-	Synonyms	0	GenebankID or UniProtKB
9823.ENSSSCP00000026329 (http://string-db.org/newstring.cgi/show_network_section.pl?identifier=9823.ENSSSCP00000026329)	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](https://www.gephebase.org/search-criteria?/and+Presumptive+Null=))

Molecular Type

Unknown ([https://www.gephebase.org/search-criteria?/and+Molecular Type="+Unknown+"#gephebase-summary-title](https://www.gephebase.org/search-criteria?/and+Molecular+Type=))

Aberration Type

Unknown ([https://www.gephebase.org/search-criteria?/and+Aberration Type="+Unknown+"#gephebase-summary-title](https://www.gephebase.org/search-criteria?/and+Aberration+Type=))

Molecular Details of the Mutation

-

Experimental Evidence

Association Mapping ([https://www.gephebase.org/search-criteria?/and+Experimental Evidence="+Association Mapping+"#gephebase-summary-title](https://www.gephebase.org/search-criteria?/and+Experimental+Evidence=))

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

No matches found.

Related Genes

No matches found.

Related Haplotypes

EXTERNAL LINKS

COMMENTS