GEPHE SUMMARY

Gephebase Gene

CORIN (https://www.gephebase.org/search-criteria?/and+Gene Gephebase=^CORIN^#gephebase-summary-title)

GepheID

GP00002169

Entry Status

Published

Main curator

Martin

PHENOTYPIC CHANGE

Trait Category

Morphology (https://www.gephebase.org/search-criteria?/and+Trait Category=^Morphology^#gephebase-summary-title)

Trait

Coloration (coat) (https://www.gephebase.org/search-criteria?/and+Trait=^Coloration (coat)^#gephebase-summary-title)

Trait State in Taxon A

Orange striped tiger

Trait State in Taxon B

Golden (tabby) tiger homozygous for the recessive wideband allele

Ancestral State

Taxon A

Taxonomic Status

Intraspecific (https://www.gephebase.org/search-criteria?/and+Taxonomic Status=^Intraspecific^#gephebase-summary-title)

Taxon A

Latin Name

Panthera tigris (https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Panthera tigris^#gephebase-summary-title)

Common Name

tiger

Synonyms

tiger

Rank

species

Lineage

cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Boreoeutheria; Laurasiatheria; Carnivora; Feliformia; Felidae; Pantherinae; Panthera

Parent

Panthera () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9688)

NCBI Taxonomy ID

9694 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9694)

is Taxon A an Infraspecies?

No

Taxon B

Latin Name

Panthera tigris (https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Panthera tigris^#gephebase-summary-title)

Common Name

tiger

Synonyms

tiger

Rank

species

Lineage

cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Boreoeutheria; Laurasiatheria; Carnivora; Feliformia; Felidae; Pantherinae; Panthera

Parent

Panthera () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9688)

NCBI Taxonomy ID

9694 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9694)

is Taxon B an Infraspecies?

Yes

Taxon B Description

Panthera tigris tigris - Bengal tiger (White tiger)

GENOTYPIC CHANGE

Generic Gene Name

Corin

Synonyms

Lrp4; AV273130; Crn

String

10090.ENSMUSP00000005352 (http://string-db.org/newstring_cgi/show_network_section.pl?identifier=10090.ENSMUSP00000005352)

Sequence Similarities

Belongs to the peptidase S1 family.

GO - Molecular Function

GO:0004175 : endopeptidase activity (https://www.ebi.ac.uk/QuickGO/term/GO:0004175)
GO:0005044 : scavenger receptor activity (https://www.ebi.ac.uk/QuickGO/term/GO:0005044)
GO:0004252 : serine-type endopeptidase activity (https://www.ebi.ac.uk/QuickGO/term/GO:0004252)

UniProtKB Mus musculus

Q9Z319 (http://www.uniprot.org/uniprot/Q9Z319)

GenebankID or UniProtKB

()

GO - Biological Process

GO:0030182 : neuron differentiation (https://www.ebi.ac.uk/QuickGO/term/GO:0030182)
GO:0007565 : female pregnancy (https://www.ebi.ac.uk/QuickGO/term/GO:0007565)
GO:0008217 : regulation of blood pressure
(https://www.ebi.ac.uk/QuickGO/term/GO:0008217)
GO:0016486 : peptide hormone processing
(https://www.ebi.ac.uk/QuickGO/term/GO:0016486)
GO:0035813 : regulation of renal sodium excretion
(https://www.ebi.ac.uk/QuickGO/term/GO:0035813)
GO:0003050 : regulation of systemic arterial blood pressure by atrial natriuretic peptide
(https://www.ebi.ac.uk/QuickGO/term/GO:0003050)

GO - Cellular Component

GO:0005886 : plasma membrane (https://www.ebi.ac.uk/QuickGO/term/GO:0005886)
GO:0015629 : actin cytoskeleton (https://www.ebi.ac.uk/QuickGO/term/GO:0015629)
GO:0005887 : integral component of plasma membrane
(https://www.ebi.ac.uk/QuickGO/term/GO:0005887)
GO:0005576 : extracellular region (https://www.ebi.ac.uk/QuickGO/term/GO:0005576)
GO:0016604 : nuclear body (https://www.ebi.ac.uk/QuickGO/term/GO:0016604)
GO:0031410 : cytoplasmic vesicle (https://www.ebi.ac.uk/QuickGO/term/GO:0031410)
GO:0009986 : cell surface (https://www.ebi.ac.uk/QuickGO/term/GO:0009986)

Presumptive Null

No (https://www.gephebase.org/search-criteria?/and+Presumptive Null=^No^#gephebase-summary-title)

Molecular Type

Coding (https://www.gephebase.org/search-criteria?/and+Molecular Type=^Coding^#gephebase-summary-title)

Aberration Type

SNP (https://www.gephebase.org/search-criteria?/and+Aberration Type=^SNP^#gephebase-summary-title)

SNP Coding Change

Nonsynonymous

Molecular Details of the Mutation

c.1759C >T p.H587Y

Experimental Evidence

Linkage Mapping (https://www.gephebase.org/search-criteria?/and+Experimental Evidence=^Linkage Mapping^#gephebase-summary-title)

	Taxon A	Taxon B	Position
Codon	-	-	-
Amino-acid	His	Tyr	587

Main Reference

The genetics of tiger pelage color variations. (2017) (https://pubmed.ncbi.nlm.nih.gov/28281538)

Authors

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Abstract

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Additional References

RELATED GEPHE

Related Genes

1 (SLC45A2=MATP) (https://www.gephebase.org/search-criteria?/or+Taxon ID=^9694^/and+Trait=Coloration/and+groupHaplotypes=true#gephebase-summary-title)

Related Haplotypes

No matches found.

EXTERNAL LINKS

COMMENTS

@Epistasis in captivity the double homozygotes with the Agouti allele underlie the Snow White phenotype https://omia.org/OMIA002159/9694/