GEPHE SUMMARY

Gephebase Gene

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

Entry Status

Published

GepheID

GP00001907

Main curator

Courtier

PHENOTYPIC CHANGE

Trait Category

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

Trait

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

Trait State in Taxon A

Asian badger

Trait State in Taxon B

Asian badger

Ancestral State

Taxon A

Taxonomic Status

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

Taxon A

Latin Name

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

Common Name

Asian badger

Synonyms

Meles meles leucurus; Asian badger; Meles leucurus (Hodgson, 1847)

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; Caniformia; Mustelidae; Melinae; Meles

Parent

Meles () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9661)

NCBI Taxonomy ID

702266 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 702266)

is Taxon A an Infraspecies?

No

Taxon B

Latin Name

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

Common Name

Asian badger

Synonyms

Meles meles leucurus; Asian badger; Meles leucurus (Hodgson, 1847)

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; Caniformia; Mustelidae; Melinae; Meles

Parent

Meles () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9661)

NCBI Taxonomy ID

702266 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 702266)

is Taxon B an Infraspecies?

No

GENOTYPIC CHANGE

Generic Gene Name

Amy1

Synonyms

Amy-1; Amy1a; C030014B17Rik; Amy-1-a

String

10090.ENSMUSP00000070368 (http://string-db.org/newstring_cgi/show_network_section.pl?identifier= 10090.ENSMUSP00000070368)

Sequence Similarities

Belongs to the glycosyl hydrolase 13 family.

GO - Molecular Function

GO:0004556 : alpha-amylase activity (https://www.ebi.ac.uk/QuickGO/term/GO:0004556)
GO:0103025 : alpha-amylase activity (releasing maltohexaose) (https://www.ebi.ac.uk/QuickGO/term/GO:0103025)
GO:0005509 : calcium ion binding (https://www.ebi.ac.uk/QuickGO/term/GO:0005509)
GO:0016160 : amylase activity (https://www.ebi.ac.uk/QuickGO/term/GO:0016160)
GO:0031404 : chloride ion binding (https://www.ebi.ac.uk/QuickGO/term/GO:0031404)

UniProtKB Mus musculus

P00687 (http://www.uniprot.org/uniprot/P00687)

GenebankID or UniProtKB

()

GO - Biological Process

GO:0009617 : response to bacterium (https://www.ebi.ac.uk/QuickGO/term/GO:0009617)
GO:0016052 : carbohydrate catabolic process
(https://www.ebi.ac.uk/QuickGO/term/GO:0016052)

GO - Cellular Component

GO:0005615 : extracellular space (https://www.ebi.ac.uk/QuickGO/term/GO:0005615)

Presumptive Null

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

Molecular Type

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

Aberration Type

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

Insertion Size

1-10 kb

Molecular Details of the Mutation

Copy Number Variation varies between one and four in this species

Experimental Evidence

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

Main Reference

Variation in pancreatic amylase gene copy number among Eurasian badgers (Carnivora, Mustelidae, Meles) and its relationship to diet . (2019)
(https://pubmed.ncbi.nlm.nih.gov/00000000.000016)

Authors

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Abstract

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Additional References

RELATED GEPHE

Related Genes

No matches found.

Related Haplotypes

No matches found.

EXTERNAL LINKS

COMMENTS

@ParallelEvolution in mice; humans; dogs; rats