GEPHE SUMMARY

Gephebase Gene
KRT75L4 (https://www.gephebase.org/search-criteria?/and+Gene Gephebase=^KRT75L4^#gephebase-summary-title)

GepheID
GP00002334

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

Trait State in Taxon A
Gallus gallus

Trait State in Taxon B
Gallus gallus - Frizzle Feather in Qilin chicken breed

Ancestral State
Taxon A

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

Taxon A

Latin Name
Gallus gallus (https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Gallus gallus^#gephebase-summary-title)

Common Name
chicken

Synonyms
Gallus gallus domesticus; chicken; bantam; chickens

Rank
species

Lineage
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Sauropsida; Sauria; Archelosauria; Archosauria; Dinosauria; Saurischia; Theropoda; Coelurosauria; Aves; Neognathae; Galloanserae; Galliformes; Phasianidae; Phasianinae; Gallus

Parent
Gallus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9030)

NCBI Taxonomy ID
9031 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9031)

is Taxon A an Infraspecies?
No

Taxon B

Latin Name
Gallus gallus (https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Gallus gallus^#gephebase-summary-title)

Common Name
chicken

Synonyms
Gallus gallus domesticus; chicken; bantam; chickens

Rank
species

Lineage
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Sauropsida; Sauria; Archelosauria; Archosauria; Dinosauria; Saurischia; Theropoda; Coelurosauria; Aves; Neognathae; Galloanserae; Galliformes; Phasianidae; Phasianinae; Gallus

Parent
Gallus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9030)

NCBI Taxonomy ID
9031 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9031)

is Taxon B an Infraspecies?
Yes

Taxon B Description
Gallus gallus - Frizzle Feather

GENOTYPIC CHANGE

Generic Gene Name
KRT75L4

Synonyms
-

String
-

Sequence Similarities
Belongs to the intermediate filament family.

GO - Molecular Function
-

GO - Biological Process
-

GO - Cellular Component
GO:0045095 : keratin filament (https://www.ebi.ac.uk/QuickGO/term/GO:0045095)

UniProtKB Gallus gallus
A0A1L1RKR4 (http://www.uniprot.org/uniprot/A0A1L1RKR4)

GenebankID or UniProtKB
AEX59147.1 (https://www.ncbi.nlm.nih.gov/nuccore/AEX59147.1)

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

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

Deletion Size

10-99 bp

Molecular Details of the Mutation

15bp deletion resulting in loss of 5 conserved amino-acids

Experimental Evidence

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

Main Reference

A parallel mechanism underlying frizzle in domestic chickens. (2018) (https://pubmed.ncbi.nlm.nih.gov/29868726)

Authors

Guo X; Li YQ; Wang MS; Wang ZB; Zhang Q; Shao Y; Jiang RS; Wang S; Ma CD; Murphy RW; Wang GQ; Dong J; Zhang L; Wu DD; Du BW; Peng MS; Zhang YP

Abstract

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Additional References

RELATED GEPHE

Related Genes

14 (ABCA1, CDKN2A, CYP19A1, Endothelin receptor B2, MC1R, PMEL17, SLC45A2=MATP, SOX10, tyrosinase (TYR), tyrosinase-related protein 1 (TYRP1), FGF20, GDF7, HOXC8 - uncertain, KRT6A) (https://www.gephebase.org/search-criteria?/or+Taxon ID=^9031^/and+Trait=Feathers/and+groupHaplotypes=true#gephebase-summary-title)

Related Haplotypes

No matches found.

EXTERNAL LINKS

COMMENTS

@Parallelism with in-frame deletion in two distinct keratin genes