

## GEPHE SUMMARY

<p>I Kappa B Kinase Interacting Protein (IKBIP) (<a href="https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=^I+Kappa+B+Kinase+Interacting+Protein+(IKBIP)^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=^I+Kappa+B+Kinase+Interacting+Protein+(IKBIP)^#gephebase-summary-title</a>)</p> <p>Published</p>	<p>Gephebase Gene</p> <p>GP00001678</p> <p>Prigent</p> <p>Entry Status</p>	<p>GepheID</p> <p>Main curator</p>
--	--	------------------------------------

## PHENOTYPIC CHANGE

<p>Physiology (<a href="https://www.gephebase.org/search-criteria?/and+Trait+Category=^Physiology^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Trait+Category=^Physiology^#gephebase-summary-title</a>)</p> <p>Lifespan (<a href="https://www.gephebase.org/search-criteria?/and+Trait=^Lifespan^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Trait=^Lifespan^#gephebase-summary-title</a>)</p> <p>Strain with a maximum lifespan of ~1 year</p> <p>Strain from Zimbabwe with a maximum lifespan of 4-6 months</p> <p>Unknown</p> <p>Intraspecific (<a href="https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=^Intraspecific^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=^Intraspecific^#gephebase-summary-title</a>)</p>	<p>Trait Category</p> <p>Trait</p> <p>Trait State in Taxon A</p> <p>Trait State in Taxon B</p> <p>Ancestral State</p> <p>Taxonomic Status</p>	<p>Taxon A</p> <p>Latin Name</p> <p><i>Nothobranchius furzeri</i> (<a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Nothobranchius+furzeri^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Nothobranchius+furzeri^#gephebase-summary-title</a>)</p> <p>Common Name</p> <p>turquoise killifish</p> <p>Synonyms</p> <p>turquoise killifish; <i>Nothobranchius furzeri</i> Jubb, 1971</p> <p>Rank</p> <p>species</p> <p>Lineage</p> <p>cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Actinopterygii; Actinopteri; Neopterygii; Teleostei; Osteoglossocephalai; Clupeocephala; Euteleostomorpha; Neoteleostei; Eurypterygia; Ctenosquamata; Acanthomorpha; Euacanthomorpha; Percomorphaceae; Ovalentaria; Atherinomorphae; Cyprinodontiformes; Aplocheiloidei; Nothobranchiidae; Nothobranchius</p> <p>Parent</p> <p><i>Nothobranchius</i> () - (Rank: genus) (<a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=28779">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=28779</a>)</p> <p>NCBI Taxonomy ID</p> <p>105023 (<a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=105023">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=105023</a>)</p> <p>is Taxon A an Intraspecies?</p> <p>Yes</p> <p>Taxon A Description</p> <p>Killifish MZM-0410</p>	<p>Taxon B</p> <p>Latin Name</p> <p><i>Nothobranchius furzeri</i> (<a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Nothobranchius+furzeri^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Nothobranchius+furzeri^#gephebase-summary-title</a>)</p> <p>Common Name</p> <p>turquoise killifish</p> <p>Synonyms</p> <p>turquoise killifish; <i>Nothobranchius furzeri</i> Jubb, 1971</p> <p>Rank</p> <p>species</p> <p>Lineage</p> <p>cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Actinopterygii; Actinopteri; Neopterygii; Teleostei; Osteoglossocephalai; Clupeocephala; Euteleostomorpha; Neoteleostei; Eurypterygia; Ctenosquamata; Acanthomorpha; Euacanthomorpha; Percomorphaceae; Ovalentaria; Atherinomorphae; Cyprinodontiformes; Aplocheiloidei; Nothobranchiidae; Nothobranchius</p> <p>Parent</p> <p><i>Nothobranchius</i> () - (Rank: genus) (<a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=28779">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=28779</a>)</p> <p>NCBI Taxonomy ID</p> <p>105023 (<a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=105023">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=105023</a>)</p> <p>is Taxon B an Intraspecies?</p> <p>Yes</p> <p>Taxon B Description</p> <p>Killifish GRZ strain from Zimbabwe</p>
--	---	--	--

## GENOTYPIC CHANGE

<p>IKBIP</p> <p>IKIP</p> <p>-</p> <p>-</p> <p>-</p> <p>GO:0010165 : response to X-ray (<a href="https://www.ebi.ac.uk/QuickGO/term/GO:0010165">https://www.ebi.ac.uk/QuickGO/term/GO:0010165</a>)</p>	<p>Generic Gene Name</p> <p>Synonyms</p> <p>String</p> <p>Sequence Similarities</p> <p>GO - Molecular Function</p> <p>GO - Biological Process</p> <p>GO - Cellular Component</p>	<p>UniProtKB Homo sapiens</p> <p>Q70UQ0 (<a href="http://www.uniprot.org/uniprot/Q70UQ0">http://www.uniprot.org/uniprot/Q70UQ0</a>)</p> <p>GenebankID or UniProtKB</p> <p>()</p>
---	--	--

GO:0016021 : integral component of membrane  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0016021>)  
GO:0016020 : membrane (<https://www.ebi.ac.uk/QuickGO/term/GO:0016020>)  
GO:0005783 : endoplasmic reticulum  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0005783>)  
GO:0005789 : endoplasmic reticulum membrane  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0005789>)

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

Under positive selection; down regulated in aging skin

Experimental Evidence

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

Main Reference

Insights into Sex Chromosome Evolution and Aging from the Genome of a Short-Lived Fish. (2015) (<https://pubmed.ncbi.nlm.nih.gov/26638077>)

Authors

Reichwald K; Petzold A; Koch P; Downie BR; Hartmann N; Prietsch S; Baumgart M; Chalopin D; Felder M; Bens M; Sahn A; Szafranski K; Taudien S; Groth M; Arisi I; Weise A; Bhatt SS; Sharma V; Kraus JM; Schmid F; Priebe S; Liehr T; GÄ¶rlach M; Than ME; Hiller M; Kestler HA; Volff JN; Scharl M; Cellerino A; Englert C; Platzer M

Abstract

The killifish *Nothobranchius furzeri* is the shortest-lived vertebrate that can be bred in the laboratory. Its rapid growth, early sexual maturation, fast aging, and arrested embryonic development (diapause) make it an attractive model organism in biomedical research. Here, we report a draft sequence of its genome that allowed us to uncover an intra-species Y chromosome polymorphism representing-in real time-different stages of sex chromosome formation that display features of early mammalian XY evolution "in action." Our data suggest that *gdf6Y*, encoding a TGF- $\beta$  family growth factor, is the master sex-determining gene in *N.Ä furzeri*. Moreover, we observed genomic clustering of aging-related genes, identified genes under positive selection, and revealed significant similarities of gene expression profiles between diapause and aging, particularly for genes controlling cell cycle and translation. The annotated genome sequence is provided as an online resource (<http://www.nothobranchius.info/NFINgb>).

Copyright © 2015 Elsevier Inc. All rights reserved.

Additional References

## RELATED GEPHE

Related Genes

1 (Inhibitor of DNA binding 3 (id3)) (<https://www.gephebase.org/search-criteria?/or+Taxon ID=^105023^/and+Trait=Lifespan/and+groupHaplotypes=true#gephebase-summary-title>)

Related Haplotypes

No matches found.

## EXTERNAL LINKS

## COMMENTS