

GEPHE SUMMARY

<p>prophenoloxidase 1 (PPO1) (https://www.gephebase.org/search-criteria?/and+Gene Gephebase=[^]prophenoloxidase 1 (PPO1)[^]#gephebase-summary-title)</p> <p>Published</p>	<p>Gephebase Gene</p> <p>Entry Status</p>	<p>GP00002001</p> <p>Courtier</p>	<p>GepheID</p> <p>Main curator</p>
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PHENOTYPIC CHANGE

<p>Physiology (https://www.gephebase.org/search-criteria?/and+Trait Category=[^]Physiology[^]#gephebase-summary-title)</p> <p>Enzymatic activity (https://www.gephebase.org/search-criteria?/and+Trait=[^]Enzymatic activity[^]#gephebase-summary-title)</p> <p>Drosophila melanogaster</p> <p>Drosophila melanogaster - greatly reduced phenoloxidase activity</p> <p>Taxon A</p> <p>Intraspecific (https://www.gephebase.org/search-criteria?/and+Taxonomic Status=[^]Intraspecific[^]#gephebase-summary-title)</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>Drosophila melanogaster (https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=[^]Drosophila melanogaster[^]#gephebase-summary-title)</p> <p>Common Name</p> <p>fruit fly</p> <p>Synonyms</p> <p>Sophophora melanogaster; fruit fly; Drosophila melanogaster Meigen, 1830; Sophophora melanogaster (Meigen, 1830); Drosophila melangaster</p> <p>Rank</p> <p>species</p> <p>Lineage</p> <p>cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Panarthropoda; Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Insecta; Dicondylia; Pterygota; Neoptera; Holometabola; Diptera; Brachycera; Muscomorpha; Eremoneura; Cyclorrhapha; Schizophora; Acalyptratae; Ephydroidea; Drosophilidae; Drosophilinae; Drosophilini; Drosophila; Sophophora; melanogaster group; melanogaster subgroup</p> <p>Parent</p> <p>melanogaster subgroup () - (Rank: species subgroup) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=32351)</p> <p>NCBI Taxonomy ID</p> <p>7227 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=7227)</p> <p>is Taxon A an Intraspecies?</p> <p>No</p>	<p>Taxon B</p> <p>Latin Name</p> <p>Drosophila melanogaster (https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=[^]Drosophila melanogaster[^]#gephebase-summary-title)</p> <p>Common Name</p> <p>fruit fly</p> <p>Synonyms</p> <p>Sophophora melanogaster; fruit fly; Drosophila melanogaster Meigen, 1830; Sophophora melanogaster (Meigen, 1830); Drosophila melangaster</p> <p>Rank</p> <p>species</p> <p>Lineage</p> <p>cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Panarthropoda; Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Insecta; Dicondylia; Pterygota; Neoptera; Holometabola; Diptera; Brachycera; Muscomorpha; Eremoneura; Cyclorrhapha; Schizophora; Acalyptratae; Ephydroidea; Drosophilidae; Drosophilinae; Drosophilini; Drosophila; Sophophora; melanogaster group; melanogaster subgroup</p> <p>Parent</p> <p>melanogaster subgroup () - (Rank: species subgroup) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=32351)</p> <p>NCBI Taxonomy ID</p> <p>7227 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=7227)</p> <p>is Taxon B an Intraspecies?</p> <p>No</p>
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GENOTYPIC CHANGE

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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+No))

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+Unknown))

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+Unknown))

Molecular Details of the Mutation

Exact causing mutation(s) unknown

Experimental Evidence

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

Main Reference

Genetic variants affecting phenoloxidase activity in *Drosophila melanogaster*. (1997) (<https://pubmed.ncbi.nlm.nih.gov/9238517>)

Authors

Asada N

Abstract

In *Drosophila melanogaster*, two new variants affecting the activity of phenoloxidase were found in natural populations at Gomel in Belorussia and at Krasnodar in Russia. Prophenoloxidases, A1 and A3, in these variants had the same mobilities on native electrophoresis as the wild type. However, enzymatic activities in their activated states were much lower than in the wild type, whereas the existence of prophenoloxidase proteins was demonstrated. Egg-to-adult and relative viabilities in the variants did not decrease at temperature between 18 and 29 degrees C. Genetic analyses indicated that the genes showing the phenotype of variants are new alleles of Mox and Dox-3 on the second chromosome.

Additional References

RELATED GEPHE

Related Genes

3 (Dopa oxidase-3 (Dox-3), glycerol-3-phosphate dehydrogenase (Gpdh), tryptophan phenylalanine hydroxylase) ([https://www.gephebase.org/search-criteria?/or+Taxon ID=^7227^/and+Trait=Enzymatic activity/and+groupHaplotypes=true#gephebase-summary-title](https://www.gephebase.org/search-criteria?/or+Taxon+ID+7227+and+Trait+Enzymatic+activity+and+groupHaplotypes=true#gephebase-summary-title))

Related Haplotypes

No matches found.

EXTERNAL LINKS

COMMENTS

No UniProtKB entry for this gene - <http://flybase.org/reports/FBal0066255>