

## GEPHE SUMMARY

	Gephebase Gene		GephelD
prophenoloxidase 1 (PPO1) ( <a href="https://www.gephebase.org/search-criteria/?and+Gene">https://www.gephebase.org/search-criteria/?and+Gene</a>	GP00002001		
Gephebase="prophenoloxidase 1 (PPO1)"#gephebase-summary-title)			Main curator
Published	Entry Status	Courtier	

## PHENOTYPIC CHANGE

	Trait Category		
Physiology ( <a href="https://www.gephebase.org/search-criteria/?and+Trait">https://www.gephebase.org/search-criteria/?and+Trait</a>			
Category="Physiology">#gephebase-summary-title)			
Enzymatic activity ( <a href="https://www.gephebase.org/search-criteria/?and+Trait=^Enzymatic">https://www.gephebase.org/search-criteria/?and+Trait=^Enzymatic</a>	Trait		
activity"#gephebase-summary-title)			
Drosophila melanogaster	Trait State in Taxon A		
Drosophila melanogaster - greatly reduced phenoloxidase activity	Trait State in Taxon B		
Taxon A	Ancestral State		
Intraspecific ( <a href="https://www.gephebase.org/search-criteria/?and+Taxonomic">https://www.gephebase.org/search-criteria/?and+Taxonomic</a>	Taxonomic Status		
Status="Intraspecific">#gephebase-summary-title)			
Taxon A	Latin Name	Taxon B	Latin Name
Drosophila melanogaster ( <a href="https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=^Drosophila+melanogaster">#gephebase-summary-title)</a>	Drosophila melanogaster ( <a href="https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=^Drosophila+melanogaster">#gephebase-summary-title)</a>	Drosophila melanogaster ( <a href="https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=^Drosophila+melanogaster">#gephebase-summary-title)</a>	Drosophila melanogaster ( <a href="https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=^Drosophila+melanogaster">#gephebase-summary-title)</a>
fruit fly	Common Name	Common Name	
Sophophora melanogaster; fruit fly; Drosophila melanogaster Meigen, 1830; Sophophora melanogaster (Meigen, 1830); Drosophila melanogaster	Synonyms	Sophophora melanogaster; fruit fly; Drosophila melanogaster Meigen, 1830; Sophophora melanogaster (Meigen, 1830); Drosophila melanogaster	Synonyms
species	Rank	Rank	
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; Ephydriodea; Drosophilidae; Drosophilinae; Drosophilini; Drosophila; Sophophora; melanogaster group; melanogaster subgroup	Lineage	Lineage	
melanogaster subgroup () - (Rank: species subgroup) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=32351">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=32351</a> )	Parent	melanogaster subgroup () - (Rank: species subgroup) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=32351">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=32351</a> )	Parent
7227 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=7227">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=7227</a> )	NCBI Taxonomy ID	7227 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=7227">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=7227</a> )	NCBI Taxonomy ID
No	is Taxon A an Infraspecies?	is Taxon B an Infraspecies?	

## GENOTYPIC CHANGE

-	Generic Gene Name		UniProtKB
-	0		
-	Synonyms		GenebankID or UniProtKB
-	0		
-	String		
-	Sequence Similarities		
-	GO - Molecular Function		
-	GO - Biological Process		
-	GO - Cellular Component		
-			Presumptive Null

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

Molecular Type

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

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 ([#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) ([#gephebase-summary-title\)](https://www.gephebase.org/search-criteria?/or+Taxon ID=^7227^/and+Trait=Enzymatic activity/and+groupHaplotypes=true)

Related Haplotypes

No matches found.

## EXTERNAL LINKS

## COMMENTS

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