

## GEPHE SUMMARY

<p>glycerol-3-phosphate dehydrogenase (Gpdh) (<a href="https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=glycerol-3-phosphate+dehydrogenase+(Gpdh)^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=glycerol-3-phosphate+dehydrogenase+(Gpdh)^#gephebase-summary-title</a>)</p> <p>Published</p>	<p>Gephebase Gene</p> <p>GP00001992</p> <p>Courtier</p> <p>Entry Status</p>	<p>GepheID</p> <p>Main curator</p>
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## 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>Enzymatic activity (<a href="https://www.gephebase.org/search-criteria?/and+Trait=Enzymatic+activity^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Trait=Enzymatic+activity^#gephebase-summary-title</a>)</p> <p>Drosophila melanogaster - wild-type activity</p> <p>Drosophila melanogaster - lower activity</p> <p>Taxon A</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>Drosophila melanogaster (<a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Drosophila+melanogaster^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Drosophila+melanogaster^#gephebase-summary-title</a>)</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; Acalypratae; Ephydroidea; Drosophilidae; Drosophilinae; Drosophilini; Drosophila; Sophophora; melanogaster group; melanogaster subgroup</p> <p>Parent</p> <p>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>)</p> <p>NCBI Taxonomy ID</p> <p>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>)</p> <p>is Taxon A an Intraspecies?</p> <p>No</p>	<p>Taxon B</p> <p>Latin Name</p> <p>Drosophila melanogaster (<a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Drosophila+melanogaster^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Drosophila+melanogaster^#gephebase-summary-title</a>)</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; Acalypratae; Ephydroidea; Drosophilidae; Drosophilinae; Drosophilini; Drosophila; Sophophora; melanogaster group; melanogaster subgroup</p> <p>Parent</p> <p>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>)</p> <p>NCBI Taxonomy ID</p> <p>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>)</p> <p>is Taxon B an Intraspecies?</p> <p>No</p>
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## GENOTYPIC CHANGE

<p>Gpdh</p> <p>GPD; alpha-GPD; alpha-Gpdh; alpha-GPDH; alpha-GPDH-1; alphaGpd; alphaGpdh; alphaGPDH; alphaGpdh-1; CG9042; dGpdh; Dmel\CG9042; DmG3PDH; DROGPDHA; G3pdh; G3PDH; GAPDH; Gdh; Gpd; GPDA; gpdh; Gpdh; GPDH; gpdh-1; GPDH-1; sn-Gpdh</p> <p>String</p> <p>7227.FBpp0305431 (<a href="http://string-db.org/newstring_cgi/show_network_section.pl?identifier=7227.FBpp0305431">http://string-db.org/newstring_cgi/show_network_section.pl?identifier=7227.FBpp0305431</a>)</p> <p>Sequence Similarities</p> <p>Belongs to the NAD-dependent glycerol-3-phosphate dehydrogenase family.</p> <p>GO - Molecular Function</p>	<p>Generic Gene Name</p> <p>Synonyms</p> <p>String</p> <p>Sequence Similarities</p> <p>GO - Molecular Function</p>	<p>UniProtKB Drosophila melanogaster</p> <p>P13706 (<a href="http://www.uniprot.org/uniprot/P13706">http://www.uniprot.org/uniprot/P13706</a>)</p> <p>GenebankID or UniProtKB</p>
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GO:0042803 : protein homodimerization activity  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0042803>)  
GO:0051287 : NAD binding (<https://www.ebi.ac.uk/QuickGO/term/GO:0051287>)  
GO:0004367 : glycerol-3-phosphate dehydrogenase [NAD+] activity  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0004367>)

GO - Biological Process

GO:0005975 : carbohydrate metabolic process  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0005975>)  
GO:0006067 : ethanol metabolic process  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0006067>)  
GO:0055114 : oxidation-reduction process  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0055114>)  
GO:0006641 : triglyceride metabolic process  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0006641>)  
GO:0055093 : response to hyperoxia (<https://www.ebi.ac.uk/QuickGO/term/GO:0055093>)  
GO:0007629 : flight behavior (<https://www.ebi.ac.uk/QuickGO/term/GO:0007629>)  
GO:0046168 : glycerol-3-phosphate catabolic process  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0046168>)  
GO:0006072 : glycerol-3-phosphate metabolic process  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0006072>)  
GO:0006650 : glycerophospholipid metabolic process  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0006650>)  
GO:0006116 : NADH oxidation (<https://www.ebi.ac.uk/QuickGO/term/GO:0006116>)

GO - Cellular Component

GO:0005829 : cytosol (<https://www.ebi.ac.uk/QuickGO/term/GO:0005829>)  
GO:0030018 : Z disc (<https://www.ebi.ac.uk/QuickGO/term/GO:0030018>)  
GO:0009331 : glycerol-3-phosphate dehydrogenase complex  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0009331>)  
GO:0031430 : M band (<https://www.ebi.ac.uk/QuickGO/term/GO:0031430>)

No ( <a href="https://www.gephebase.org/search-criteria?/and+Presumptive Null=" no"="">#gephebase-summary-title"&gt;https://www.gephebase.org/search-criteria?/and+Presumptive Null="No"&gt;#gephebase-summary-title</a> )	Presumptive Null
Cis-regulatory ( <a cis-regulatory"="" href="https://www.gephebase.org/search-criteria?/and+Molecular Type=">#gephebase-summary-title"&gt;https://www.gephebase.org/search-criteria?/and+Molecular Type="Cis-regulatory"&gt;#gephebase-summary-title</a> )	Molecular Type
Unknown ( <a href="https://www.gephebase.org/search-criteria?/and+Aberration Type=" unknown"="">#gephebase-summary-title"&gt;https://www.gephebase.org/search-criteria?/and+Aberration Type="Unknown"&gt;#gephebase-summary-title</a> )	Aberration Type
Exact causal mutation(s) unknown.	Molecular Details of the Mutation
Linkage Mapping ( <a href="https://www.gephebase.org/search-criteria?/and+Experimental Evidence=" linkage="" mapping"="">#gephebase-summary-title"&gt;https://www.gephebase.org/search-criteria?/and+Experimental Evidence="Linkage Mapping"&gt;#gephebase-summary-title</a> )	Experimental Evidence
Genetic control of the developmental program of L-glycerol-3-phosphate dehydrogenase isozymes in Drosophila melanogaster: Identification of a cis-acting temporal element affecting GPDH expression . (1981 ) ( <a href="https://pubmed.ncbi.nlm.nih.gov/00000000.000017">https://pubmed.ncbi.nlm.nih.gov/00000000.000017</a> )	Main Reference
Bewley Glenn C	Authors
-	Abstract
	Additional References

RELATED GEPHE

3 (Dopa oxidase-3 (Dox-3), prophenoloxidase 1 (PPO1), 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=))

1 ([#gephebase-summary-title">https://www.gephebase.org/search-criteria?/or+Gene Gephebase="glycerol-3-phosphate dehydrogenase \(Gpdh\)"/and+Taxon ID="7227"/or+Gene Gephebase="glycerol-3-phosphate dehydrogenase \(Gpdh\)"/and+Taxon ID="7227">#gephebase-summary-title](https://www.gephebase.org/search-criteria?/or+Gene Gephebase=))

Related Genes

Related Haplotypes

EXTERNAL LINKS

COMMENTS

<http://flybase.org/reports/FBal0005139> - <http://flybase.org/reports/FBal0005140>

