

## GEPHE SUMMARY

	Gephebase Gene	GepheID
Lectin-24A ( <a href="https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=Lectin-24A">#https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=Lectin-24A</a> ^#gephebase-summary-title)	GP00002657	Main curator
Published	Entry Status	Courtier

## PHENOTYPIC CHANGE

	Trait Category	
Physiology ( <a href="https://www.gephebase.org/search-criteria?/and+Trait+Category=Physiology">#https://www.gephebase.org/search-criteria?/and+Trait+Category=Physiology</a> ^#gephebase-summary-title)		
	Trait	
Pathogen resistance (parasitic wasp) ( <a href="https://www.gephebase.org/search-criteria?/and+Trait=Pathogen+resistance+(parasitic+wasp)#gephebase-summary-title">#https://www.gephebase.org/search-criteria?/and+Trait=Pathogen+resistance+(parasitic+wasp)#gephebase-summary-title</a> )		
	Trait State in Taxon A	
Drosophila melanogaster - resistant		
	Trait State in Taxon B	
Drosophila melanogaster - lost the resistance		
	Ancestral State	
Taxon A		
	Taxonomic Status	
Intraspecific ( <a href="https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=Intraspecific">#https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=Intraspecific</a> ^#gephebase-summary-title)		
Taxon A		Taxon B
	Latin Name	Latin Name
Drosophila melanogaster ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Drosophila+melanogaster">#https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Drosophila+melanogaster</a> ^#gephebase-summary-title)		Drosophila melanogaster ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Drosophila+melanogaster">#https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=Drosophila+melanogaster</a> ^#gephebase-summary-title)
	Common Name	Common Name
fruit fly		fruit fly
	Synonyms	Synonyms
Sophophora melanogaster; fruit fly; Drosophila melanogaster Meigen, 1830; Sophophora melanogaster (Meigen, 1830); Drosophila melangaster		Sophophora melanogaster; fruit fly; Drosophila melanogaster Meigen, 1830; Sophophora melanogaster (Meigen, 1830); Drosophila melangaster
	Rank	Rank
species		species
	Lineage	Lineage
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		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
	Parent	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> )		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> )
	NCBI Taxonomy ID	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> )		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> )
	is Taxon A an Intraspecies?	is Taxon B an Intraspecies?
No		No

## GENOTYPIC CHANGE

	Generic Gene Name	UniProtKB
-	Synonyms	GenebankID or UniProtKB
-	String	Drosophila melanogaster
-	Sequence Similarities	
-	GO - Molecular Function	
-	GO - Biological Process	
-	GO - Cellular Component	

Presumptive Null

Yes (<https://www.gephebase.org/search-criteria?/and+Presumptive Null=^Yes^#gepbase-summary-title>)

Molecular Type

Coding (<https://www.gephebase.org/search-criteria?/and+Molecular Type=^Coding^#gepbase-summary-title>)

Aberration Type

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

SNP Coding Change

Nonsense

Molecular Details of the Mutation

L81 >STOP - point mutation that introduces a premature stop codon

Experimental Evidence

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

	Taxon A	Taxon B	Position
Codon	-	-	-
Amino-acid	Leu	STP	81

Main Reference

Recurrent loss of an immunity gene that protects *Drosophila* against a major natural parasite . (2022) (<https://pubmed.ncbi.nlm.nih.gov/00000000.000050>)

Authors

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Abstract

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Additional References

## RELATED GEPHE

Related Genes

15 (18-wheeler, CG8492, Dipteracin, Drosomycin-like 5, Ge-1, GNBP1, GNBP2, Immune deficiency, pastrel, PGRP-LC, ref(2)P, SR-CII, Tehao, Ubiquitin conjugating enzyme E2H (Ubc-E2H), CHKov1) (<https://www.gephebase.org/search-criteria?/or+Taxon ID=^7227^/and+Trait=Pathogen resistance/and+groupHaplotypes=true#gepbase-summary-title>)

Related Haplotypes

4 (<https://www.gephebase.org/search-criteria?/or+Gene Gephebase=^Lectin-24A^/and+Taxon ID=^7227^/or+Gene Gephebase=^Lectin-24A^/and+Taxon ID=^7227^#gepbase-summary-title>)

## EXTERNAL LINKS

## COMMENTS

Lectin-24A is important in the immune response that protects fruit flies against one of their main natural enemies—parasitic wasps. This immune defiance appears to be costly. Many flies carry mutated copies of this gene that are no longer functional. @BioRxiv @CRISPR