

GEPHE SUMMARY

Gephebase Gene		GepheID
ppw-1 (#gephebase-summary-title)		GP00000921
Entry Status		Main curator
Published		

PHENOTYPIC CHANGE

Trait Category	
Physiology (#gephebase-summary-title)	
Trait	
Resistance to dsRNA (#gephebase-summary-title)	
Trait State in Taxon A	
C. elegans - all other strains - sensitive	
Trait State in Taxon B	
C. elegans Hawaii - insensitive	
Ancestral State	
Taxon A	
Taxonomic Status	
Intraspecific (#gephebase-summary-title)	
Taxon A	
Taxon B	
Latin Name	
Caenorhabditis elegans (#gephebase-summary-title)	
Common Name	
-	
Synonyms	
roundworm; Rhabditis elegans; Caenorhabditis elegans (Maupas, 1900); Rhabditis elegans Maupas, 1900	
Rank	
species	
Lineage	
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Nematoda; Chromadorea; Rhabditida; Rhabditina; Rhabditomorpha; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis	
Parent	
Caenorhabditis () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6237)	
NCBI Taxonomy ID	
6239 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6239)	
is Taxon A an Intraspecies?	
No	
Taxon B Description	
C. elegans Hawaii - insensitive	

GENOTYPIC CHANGE

Generic Gene Name		UniProtKB
-		GenebankID or UniProtKB
Synonyms		BX284601 (https://www.ncbi.nlm.nih.gov/nuccore/BX284601)
-		
String		
-		
Sequence Similarities		
-		
GO - Molecular Function		
-		
GO - Biological Process		
-		
GO - Cellular Component		
-		
Presumptive Null		
Yes (#gephebase-summary-title)		

Coding (https://www.gephebase.org/search-criteria?/and+Molecular+Type=~Coding^#gephebase-summary-title)	Molecular Type
Deletion (https://www.gephebase.org/search-criteria?/and+Aberration+Type=~Deletion^#gephebase-summary-title)	Aberration Type
1-9 bp	Deletion Size
1bp deletion resulting in stop codon	Molecular Details of the Mutation
Linkage Mapping (https://www.gephebase.org/search-criteria?/and+Experimental+Evidence=~Linkage+Mapping^#gephebase-summary-title)	Experimental Evidence
PPW-1, a PAZ/PIWI protein required for efficient germline RNAi, is defective in a natural isolate of <i>C. elegans</i> . (2002) (https://pubmed.ncbi.nlm.nih.gov/12225671)	Main Reference
Tijsterman M; Okihara KL; Thijssen K; Plasterk RH	Authors
One of the remarkable aspects about RNA interference (RNAi) in <i>Caenorhabditis elegans</i> is that the trigger molecules, dsRNA, can be administered via the animal's food. We assayed whether this feature is a universal property of the species by testing numerous strains that have been isolated from different parts of the globe. We found that one isolate from Hawaii had a defect in RNAi that was specific to the germline and was a result of multiple mutations in a PAZ/PIWI domain-containing protein, which we named PPW-1. Deleting ppw-1 in the canonical <i>C. elegans</i> strain Bristol N2 makes it resistant to feeding of dsRNA directed against germline-expressed genes. PPW-1 belongs to the Argonaute family of proteins, which act in posttranscriptional gene silencing and development, and is homologous to the RNAi gene <i>rde-1</i> . Our data indicate that at least two members of this family are required for complete and effective RNAi in <i>C. elegans</i> .	Abstract
	Additional References

RELATED GEPHE

No matches found.	Related Genes
No matches found.	Related Haplotypes

EXTERNAL LINKS

COMMENTS