

	Gephebase Gene	GepheID
sid-2 (https://www.gephebase.org/search-criteria?/and+Gene+Gephebase%3Dsid-2%23gephebase-summary-title)	GP00001051	Main curator
Published	Entry Status: Martin	

Trait Category		Trait	
Physiology (#https://www.gephebase.org/search-criteria?/and+Trait+Category=~Physiology)			
Immune response (RNAi efficiency) (#https://www.gephebase.org/search-criteria?/and+Trait=~Immune+response+(RNAi+efficiency))			
	Trait State in Taxon A		
Caenorhabditis briggsae and other outgroups - no environmental RNAi		Trait State in Taxon B	
Caenorhabditis elegans - environmental RNAi			
	Ancestral State		
Data not curated			
	Taxonomic Status		
Interspecific (#https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=~Interspecific)			
Taxon A	Latin Name	Taxon B	Latin Name
Caenorhabditis		Caenorhabditis elegans	
(#https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=~Caenorhabditis)		(#https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=~Caenorhabditis+elegans)	
	Common Name		Common Name
-		-	
	Synonyms		Synonyms
-		roundworm; Rhabditis elegans; Caenorhabditis elegans (Maupas, 1900); Rhabditis elegans Maupas, 1900	
	Rank		Rank
genus		species	
	Lineage		Lineage
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Nematoda; Chromadorea; Rhabditida; Rhabditina; Rhabditomorpha; Rhabditoidea; Rhabditidae; Peloderinae		cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Nematoda; Chromadorea; Rhabditida; Rhabditina; Rhabditomorpha; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis	
	Parent		Parent
Peloderinae () - (Rank: subfamily)		Caenorhabditis () - (Rank: genus)	
(https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=55885)		(https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6237)	
	NCBI Taxonomy ID		NCBI Taxonomy ID
6237		6239	
(https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6237)		(https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6239)	
	is Taxon A an Intraspecies?		is Taxon B an Intraspecies?
No		No	

Generic Gene Name	UniProtKB Caenorhabditis elegans
sid-2	G5EEV9 (http://www.uniprot.org/uniprot/G5EEV9)
ZK520.2	AY466439 (https://www.ncbi.nlm.nih.gov/nuccore/AY466439)
6239.ZK520.2	
(http://string-db.org/newstring.cgi/show_network_section.pl?identifier=6239.ZK520.2)	
Sequence Similarities	
-	
GO - Molecular Function	
-	
GO - Biological Process	
GO:0006897 : endocytosis (https://www.ebi.ac.uk/QuickGO/term/GO:0006897)	
GO:0016246 : RNA interference (https://www.ebi.ac.uk/QuickGO/term/GO:0016246)	
GO:0050658 : RNA transport (https://www.ebi.ac.uk/QuickGO/term/GO:0050658)	
GO - Cellular Component	
GO:0016021 : integral component of membrane	
(https://www.ebi.ac.uk/QuickGO/term/GO:0016021)	

GO:0005886 : plasma membrane (<https://www.ebi.ac.uk/QuickGO/term/GO:0005886>)
GO:0016324 : apical plasma membrane
(<https://www.ebi.ac.uk/QuickGO/term/GO:0016324>)
GO:0005737 : cytoplasm (<https://www.ebi.ac.uk/QuickGO/term/GO:0005737>)

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

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

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

unknown

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

Caenorhabditis elegans SID-2 is required for environmental RNA interference. (2007) (<https://pubmed.ncbi.nlm.nih.gov/17563372>)

Winston WM; Sutherlin M; Wright AJ; Feinberg EH; Hunter CP

In plants and in the nematode *Caenorhabditis elegans*, an RNAi signal can trigger gene silencing in cells distant from the site where silencing is initiated. In plants, this signal is known to be a form of dsRNA, and the signal is most likely a form of dsRNA in *C. elegans* as well. Furthermore, in *C. elegans*, dsRNA present in the environment or expressed in ingested bacteria is sufficient to trigger RNAi (environmental RNAi). Ingestion and soaking delivery of dsRNA has also been described for other invertebrates. Here we report the identification and characterization of SID-2, an intestinal luminal transmembrane protein required for environmental RNAi in *C. elegans*. SID-2, when expressed in the environmental RNAi defective species *Caenorhabditis briggsae*, confers environmental RNAi.

RELATED GEPHE

No matches found.

No matches found.

EXTERNAL LINKS

COMMENTS

Presumptive Null

Molecular Type

Aberration Type

Molecular Details of the Mutation

Experimental Evidence

Main Reference

Authors

Abstract

Additional References

Related Genes

Related Haplotypes