

	Gephebase Gene	GepheID
para (kdr) (<a +para+(kdr)^#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=">https://www.gephebase.org/search-criteria?/and+Gene+Gephebase="+para+(kdr)^#gephebase-summary-title)	GP00002541	
	Entry Status	Courtier
Published		Main curator

	Trait Category				
Physiology (#https://www.gephebase.org/search-criteria?/and+TraitCategory=~Physiology)					
	Trait				
Xenobiotic resistance (insecticide) (https://www.gephebase.org/search-criteria?/and+Trait=~Xenobiotic resistance (insecticide))					
	Trait State in Taxon A				
Blatella germanica					
	Trait State in Taxon B				
Blatella germanica - resistant					
	Ancestral State				
Taxon A					
	Taxonomic Status				
Intraspecific (#https://www.gephebase.org/search-criteria?/and+TaxonomicStatus=~Intraspecific)					
Taxon A				Taxon B	
	Latin Name				Latin Name
Blattella germanica (#https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=~Blattella germanica)				Blattella germanica (#https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=~Blattella germanica)	
	Common Name				Common Name
German cockroach				German cockroach	
	Synonyms				Synonyms
German cockroach; Blattella germanica (Linnaeus, 1767); Blatella germanica				German cockroach; Blattella germanica (Linnaeus, 1767); Blatella germanica	
	Rank				Rank
species				species	
	Lineage				Lineage
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Panarthropoda; Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Insecta; Dicondylia; Pterygota; Neoptera; Polyneoptera; Dictyoptera; Blattodea; Blaberoidea; Ectobiidae; Blattellinae; Blattella				cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Panarthropoda; Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Insecta; Dicondylia; Pterygota; Neoptera; Polyneoptera; Dictyoptera; Blattodea; Blaberoidea; Ectobiidae; Blattellinae; Blattella	
	Parent				Parent
Blattella () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6972)				Blattella () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6972)	
	NCBI Taxonomy ID				NCBI Taxonomy ID
6973 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6973)				6973 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=6973)	
	is Taxon A an Intraspecies?				is Taxon B an Intraspecies?
No				No	

para	Generic Gene Name	UniProtKB Drosophila melanogaster
	Synonyms	P35500 (http://www.uniprot.org/uniprot/P35500)
bas; bss; CG9907; Dmel\CG9907; DmNav; DmNav1; DmNa[[v]]; DmNa[[V]]; DmNa[[v]]1; l(1)14Da; l(1)ESHS48; lincRNA.S9469; Nav1; Ocd; olfD; par; sbl; sbl-1; Shu; Shudderer		GenebankID or UniProtKB
	String	AGW43268 (https://www.ncbi.nlm.nih.gov/nuccore/AGW43268)
7227.FBpp0303597 (http://string-db.org/newstring.cgi/show_network_section.pl?identifier=7227.FBpp0303597)		
	Sequence Similarities	
Belongs to the sodium channel (TC 1.A.1.10) family. Para subfamily.		
	GO - Molecular Function	
GO:0005509 : calcium ion binding (https://www.ebi.ac.uk/QuickGO/term/GO:0005509)		
GO:0005244 : voltage-gated ion channel activity (https://www.ebi.ac.uk/QuickGO/term/GO:0005244)		
GO:0005248 : voltage-gated sodium channel activity (https://www.ebi.ac.uk/QuickGO/term/GO:0005248)		
GO:0005272 : sodium channel activity		

(<https://www.ebi.ac.uk/QuickGO/term/GO:0005272>)

GO - Biological Process

GO:0045433 : male courtship behavior, veined wing generated song production

(<https://www.ebi.ac.uk/QuickGO/term/GO:0045433>)

GO:0001666 : response to hypoxia (<https://www.ebi.ac.uk/QuickGO/term/GO:0001666>)

GO:0009612 : response to mechanical stimulus

(<https://www.ebi.ac.uk/QuickGO/term/GO:0009612>)

GO:0034765 : regulation of ion transmembrane transport

(<https://www.ebi.ac.uk/QuickGO/term/GO:0034765>)

GO:0035725 : sodium ion transmembrane transport

(<https://www.ebi.ac.uk/QuickGO/term/GO:0035725>)

GO:0007638 : mechanosensory behavior

(<https://www.ebi.ac.uk/QuickGO/term/GO:0007638>)

GO:0060078 : regulation of postsynaptic membrane potential

(<https://www.ebi.ac.uk/QuickGO/term/GO:0060078>)

GO - Cellular Component

GO:0005887 : integral component of plasma membrane

(<https://www.ebi.ac.uk/QuickGO/term/GO:0005887>)

GO:0001518 : voltage-gated sodium channel complex

(<https://www.ebi.ac.uk/QuickGO/term/GO:0001518>)

Presumptive Null

No (<https://www.gephebase.org/search-criteria?/and+Presumptive Null=~No^#gephebase-summary-title>)

Molecular Type

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

Aberration Type

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

SNP Coding Change

Nonsynonymous

Molecular Details of the Mutation

F999S = F1020S - T to C at nt 2996 resulting in a phenylalanine999 to serine999 amino acid change

Experimental Evidence

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

	Taxon A	Taxon B	Position
Codon	TTY	TCY	-
Amino-acid	Phe	Ser	1020

Main Reference

Variability of resistance mechanisms in pyrethroid resistant German cockroaches (Dictyoptera: Blattellidae) . (2002) (<https://pubmed.ncbi.nlm.nih.gov/00000000.000030>)

Authors

Pridgeon Julia W; Appel Arthur G; Moar William J; Liu Nannan

Abstract

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Additional References

Molecular biology of insect sodium channels and pyrethroid resistance. (2014) (<https://pubmed.ncbi.nlm.nih.gov/24704279>)

RELATED GEPHE

Related Genes

1 (resistance to dieldrin) (<https://www.gephebase.org/search-criteria?/or+Taxon ID=~6973^/and+Trait=Xenobiotic resistance/and+groupHaplotypes=true#gephebase-summary-title>)

Related Haplotypes

3 ([https://www.gephebase.org/search-criteria?/or+Gene Gephebase=~para \(kdr\)^/and+Taxon ID=~6973^/or+Gene Gephebase=~para \(kdr\)^/and+Taxon ID=~6973^#gephebase-summary-title](https://www.gephebase.org/search-criteria?/or+Gene Gephebase=~para (kdr)^/and+Taxon ID=~6973^/or+Gene Gephebase=~para (kdr)^/and+Taxon ID=~6973^#gephebase-summary-title))

EXTERNAL LINKS

COMMENTS

