

	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)	GP00002649	
	Entry Status	Courtier
Published		Main curator

Trait Category		Trait	
Physiology (#https://www.gephebase.org/search-criteria?/and+TraitCategory=~Physiology)			
Xenobiotic resistance (insecticide) (https://www.gephebase.org/search-criteria?/and+Trait=~Xenobiotic resistance (insecticide))			
	Trait State in Taxon A		
Myzus persicae			
	Trait State in Taxon B		
Myzus persicae - resistant from France			
	Ancestral State		
Taxon A			
	Taxonomic Status		
Intraspecific (#https://www.gephebase.org/search-criteria?/and+TaxonomicStatus=~Intraspecific)			
Taxon A		Taxon B	
Myzus persicae (#https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=~Myzus persicae)	Latin Name	Myzus persicae (#https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=~Myzus persicae)	Latin Name
	Common Name		Common Name
green peach aphid		green peach aphid	
	Synonyms		Synonyms
Myzus (Nectarosiphon) persicae; green peach aphid; peach-potato aphid; Myzus persicae (Sulzer, 1776); Myzus persicae		Myzus (Nectarosiphon) persicae; green peach aphid; peach-potato aphid; Myzus persicae (Sulzer, 1776); Myzus persicae	
	Rank		Rank
species		species	
	Lineage		Lineage
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Panarthropoda; Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Insecta; Dicondylia; Pterygota; Neoptera; Paraneoptera; Hemiptera; Sternorrhyncha; Aphidomorpha; Aphidoidea; Aphididae; Aphidinae; Macrosiphini; Myzus		cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Panarthropoda; Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Insecta; Dicondylia; Pterygota; Neoptera; Paraneoptera; Hemiptera; Sternorrhyncha; Aphidomorpha; Aphidoidea; Aphididae; Aphidinae; Macrosiphini; Myzus	
	Parent		Parent
Myzus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=13163)		Myzus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=13163)	
	NCBI Taxonomy ID		NCBI Taxonomy ID
13164 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=13164)		13164 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=13164)	
	is Taxon A an Intraspecies?		is Taxon B an Intraspecies?
No		No	

para	Generic Gene Name	UniProtKB Drosophila melanogaster
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	Synonyms	GenebankID or UniProtKB
7227.FBpp0303597 (http://string-db.org/newstring.cgi/show_network_section.pl?identifier= 7227.FBpp0303597)	String	P35500 (http://www.uniprot.org/uniprot/P35500) CAM98294 (https://www.ncbi.nlm.nih.gov/nuccore/CAM98294)
	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>)

No (https://www.gephebase.org/search-criteria?/and+Presumptive Null=~No~#gephebase-summary-title)	Presumptive Null
Coding (https://www.gephebase.org/search-criteria?/and+Molecular Type=~Coding~#gephebase-summary-title)	Molecular Type
SNP (https://www.gephebase.org/search-criteria?/and+Aberration Type=~SNP~#gephebase-summary-title)	Aberration Type
Nonsynonymous	SNP Coding Change
L932F	Molecular Details of the Mutation
Candidate Gene (https://www.gephebase.org/search-criteria?/and+Experimental Evidence=~Candidate Gene~#gephebase-summary-title)	Experimental Evidence

	Taxon A	Taxon B	Position
Codon	-	-	-
Amino-acid	Leu	Phe	932

Uncommon associations in target resistance among French populations of Myzus persicae from oilseed rape crops. (2011) (https://pubmed.ncbi.nlm.nih.gov/21710686)	Main Reference
Fontaine S; Caddoux L; Brazier C; Bertho C; Bertolla P; Micoud A; Roy L	Authors
Within the framework of a molecular exploration of target resistance in populations of Myzus persicae on oilseed rapes in France, (1) the S431F mutation (coding gene ace2), although previously reckoned to be rare, revealed to be frequent, (2) M918L (phenotypically characterised) and L932F (both on para) were found for the first time in M. persicae, and (3) a linkage was revealed between M918L and S431F. While until recently populations developing on French oilseed rapes were dominated by genotypes possessing pyrethroid target resistance and esterase overproduction, to date a different type of dominating genotype, equipped with carbamate and pyrethroid target resistance, seems to be invading such fields.	Abstract
Copyright Â© 2011 Society of Chemical Industry.	
The evolution of insecticide resistance in the peach potato aphid, Myzus persicae. (2014) (https://pubmed.ncbi.nlm.nih.gov/24855024)	Additional References

RELATED GEPHE

8 (acetyl-CoA carboxylase (ACC), Acetylcholinesterase (Ace-1), CYP6CY3, CYP6CY3-CYP6CY4, esterase E4, esterase FE4, nAChR, resistance to dieldrin) (https://www.gephebase.org/search-criteria?/or+Taxon ID=~13164~/and+Trait=Xenobiotic resistance/and+groupHaplotypes=true#gephebase-summary-title)	Related Genes
7 (https://www.gephebase.org/search-criteria?/or+Gene Gephebase=~para (kdr)~/and+Taxon ID=~13164~/or+Gene Gephebase=~para (kdr)~/and+Taxon ID=~13164~#gephebase-summary-title)	Related Haplotypes

EXTERNAL LINKS

COMMENTS

