

GEPHE SUMMARY

<p>esterase FE4 (https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=^esterase+FE4^#gephebase-summary-title)</p> <p>Published</p>	<p>Gephebase Gene</p> <p>Entry Status</p>	<p>GP00002642</p> <p>Courtier</p>	<p>GepheID</p> <p>Main curator</p>
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PHENOTYPIC CHANGE

<p>Physiology (https://www.gephebase.org/search-criteria?/and+Trait+Category=^Physiology^#gephebase-summary-title)</p> <p>Xenobiotic resistance (insecticide) (https://www.gephebase.org/search-criteria?/and+Trait=^Xenobiotic+resistance+(insecticide)^#gephebase-summary-title)</p> <p>Myzus persicae - sensitive</p> <p>Myzus persicae - resistant from Greece</p> <p>Taxon A</p> <p>Intraspecific (https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=^Intraspecific^#gephebase-summary-title)</p>	<p>Trait Category</p> <p>Trait</p> <p>Trait State in Taxon A</p> <p>Trait State in Taxon B</p> <p>Ancestral State</p> <p>Taxonomic Status</p>	<p>Taxon B</p> <p>Myzus persicae (https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Myzus+persicae^#gephebase-summary-title)</p> <p>green peach aphid</p> <p>Myzus (Nectarosiphon) persicae; green peach aphid; peach-potato aphid; Myzus persicae (Sulzer, 1776); Myzus persiceae</p> <p>species</p> <p>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</p> <p>Myzus () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=13163)</p> <p>13164 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=13164)</p> <p>is Taxon A an Intraspecies?</p> <p>No</p>	<p>Latin Name</p> <p>Common Name</p> <p>Synonyms</p> <p>Rank</p> <p>Lineage</p> <p>Parent</p> <p>NCBI Taxonomy ID</p> <p>is Taxon B an Intraspecies?</p>
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GENOTYPIC CHANGE

<p>-</p> <p>-</p> <p>-</p> <p>Belongs to the type-B carboxylesterase/lipase family.</p> <p>GO:0080030 : methyl indole-3-acetate esterase activity (https://www.ebi.ac.uk/QuickGO/term/GO:0080030)</p> <p>-</p> <p>-</p> <p>No (https://www.gephebase.org/search-criteria?/and+Presumptive+Null=^No^#gephebase-summary-title)</p>	<p>Generic Gene Name</p> <p>Synonyms</p> <p>String</p> <p>Sequence Similarities</p> <p>GO - Molecular Function</p> <p>GO - Biological Process</p> <p>GO - Cellular Component</p>	<p>UniProtKB Myzus persicae</p> <p>P35502 (http://www.uniprot.org/uniprot/P35502)</p> <p>0</p> <p>GenebankID or UniProtKB</p> <p>Presumptive Null</p>
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Gene Amplification (<https://www.gephebase.org/search-criteria?/and+Molecular+Type=%5E+Gene+Amplification%5E#gephebase-summary-title>)

Molecular Type

Insertion (<https://www.gephebase.org/search-criteria?/and+Aberration+Type=%5E+Insertion%5E#gephebase-summary-title>)

Aberration Type

unknown

Insertion Size

Gene amplification

Molecular Details of the Mutation

Candidate Gene (<https://www.gephebase.org/search-criteria?/and+Experimental+Evidence=%5E+Candidate+Gene%5E#gephebase-summary-title>)

Experimental Evidence

Variation in the chromosomal distribution of amplified esterase (FE4) genes in Greek field populations of *Myzus persicae* (Sulzer) . (1999) (<https://pubmed.ncbi.nlm.nih.gov/00000000.000048>)

Main Reference

Blackman RL; Spence JM; Field LM; Devonshire AL

Authors

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Abstract

Relationship between amount of esterase and gene copy number in insecticide-resistant *Myzus persicae* (Sulzer). (1999) (<https://pubmed.ncbi.nlm.nih.gov/10215614>)
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, nAChR, para (kdr), resistance to dieldrin) (<https://www.gephebase.org/search-criteria?/or+Taxon+ID=%5E13164%5E/and+Trait=Xenobiotic+resistance/and+groupHaplotypes=true#gephebase-summary-title>)

Related Genes

No matches found.

Related Haplotypes

EXTERNAL LINKS

COMMENTS

The esterase FE4 gene can be found in different copy numbers and at different sites around the genome. Amplified FE4 genes are not associated with any visible chromosomal rearrangement and are present at multiple loci in the genome.