

GEPHE SUMMARY

<p>beta-tubulin (<a +beta-tubulin+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=">https://www.gephebase.org/search-criteria?/and+Gene+Gephebase="+beta-tubulin+"#gephebase-summary-title)</p> <p>Published</p>	<p>Gephebase Gene</p> <p>Entry Status</p>	<p>GP00001822</p> <p>Courtier</p>	<p>GepheID</p> <p>Main curator</p>
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PHENOTYPIC CHANGE

<p>Physiology (<a +physiology+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Trait+Category=">https://www.gephebase.org/search-criteria?/and+Trait+Category="+Physiology+"#gephebase-summary-title)</p> <p>Xenobiotic resistance (benzimidazole) (<a +xenobiotic+resistance+(benzimidazole)+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Trait=">https://www.gephebase.org/search-criteria?/and+Trait="+Xenobiotic+resistance+(benzimidazole)+"#gephebase-summary-title)</p> <p>sensitive</p> <p>resistant</p> <p>Taxon A</p> <p>Intraspecific (<a +intraspecific+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=">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 A</p> <p>Latin Name</p> <p>Oculimacula acuformis (<a +oculimacula+acuformis+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms="+Oculimacula+acuformis+"#gephebase-summary-title)</p> <p>-</p> <p>Synonyms</p> <p>Helgardia acuformis; Mollisia acuformis; Pseudocercospora herpotrichoides var. acuformis; Ramulispora acuformis; Ramulispora herpotrichoides var. acuformis; Tapesia acuformis; Tapesia yallundae var. acuformis; CB S 495.80; CB:S:495.80</p> <p>Rank</p> <p>species</p> <p>Lineage</p> <p>cellular organisms; Eukaryota; Opisthokonta; Fungi; Dikarya; Ascomycota; saccharomyceta; Pezizomycotina; leotiomyceta; sordariomyceta; Leotiomycetes; Helotiales; Ploettnerulaceae; Oculimacula</p> <p>Parent</p> <p>Oculimacula () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=228665)</p> <p>NCBI Taxonomy ID</p> <p>110162 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=110162)</p> <p>is Taxon A an Intraspecies?</p> <p>No</p>	<p>Taxon B</p> <p>Latin Name</p> <p>Oculimacula acuformis (<a +oculimacula+acuformis+"#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms="+Oculimacula+acuformis+"#gephebase-summary-title)</p> <p>-</p> <p>Synonyms</p> <p>Helgardia acuformis; Mollisia acuformis; Pseudocercospora herpotrichoides var. acuformis; Ramulispora acuformis; Ramulispora herpotrichoides var. acuformis; Tapesia acuformis; Tapesia yallundae var. acuformis; CB S 495.80; CB:S:495.80</p> <p>Rank</p> <p>species</p> <p>Lineage</p> <p>cellular organisms; Eukaryota; Opisthokonta; Fungi; Dikarya; Ascomycota; saccharomyceta; Pezizomycotina; leotiomyceta; sordariomyceta; Leotiomycetes; Helotiales; Ploettnerulaceae; Oculimacula</p> <p>Parent</p> <p>Oculimacula () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=228665)</p> <p>NCBI Taxonomy ID</p> <p>110162 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=110162)</p> <p>is Taxon B an Intraspecies?</p> <p>No</p>
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GENOTYPIC CHANGE

<p>TUB2</p> <p>ARM10; SHE8; YFL037W</p> <p>4932.YFL037W (http://string-db.org/newstring_cgi/show_network_section.pl?identifier=4932.YFL037W)</p> <p>Belongs to the tubulin family.</p> <p>GO - Molecular Function</p> <p>GO:0005525 : GTP binding (https://www.ebi.ac.uk/QuickGO/term/GO:0005525)</p> <p>GO:0003924 : GTPase activity (https://www.ebi.ac.uk/QuickGO/term/GO:0003924)</p> <p>GO:0005200 : structural constituent of cytoskeleton (https://www.ebi.ac.uk/QuickGO/term/GO:0005200)</p> <p>GO - Biological Process</p> <p>GO:0007010 : cytoskeleton organization (https://www.ebi.ac.uk/QuickGO/term/GO:0007010)</p>	<p>Generic Gene Name</p> <p>Synonyms</p> <p>String</p> <p>Sequence Similarities</p>	<p>UniProtKB Saccharomyces cerevisiae (strain ATCC 204508 / S288c)</p> <p>P02557 (http://www.uniprot.org/uniprot/P02557)</p> <p>GenebankID or UniProtKB</p> <p>()</p>
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GO:0000278 : mitotic cell cycle (<https://www.ebi.ac.uk/QuickGO/term/GO:0000278>)
 GO:0000070 : mitotic sister chromatid segregation (<https://www.ebi.ac.uk/QuickGO/term/GO:0000070>)
 GO:0007017 : microtubule-based process (<https://www.ebi.ac.uk/QuickGO/term/GO:0007017>)
 GO:0046677 : response to antibiotic (<https://www.ebi.ac.uk/QuickGO/term/GO:0046677>)
 GO:0000226 : microtubule cytoskeleton organization (<https://www.ebi.ac.uk/QuickGO/term/GO:0000226>)
 GO:0045143 : homologous chromosome segregation (<https://www.ebi.ac.uk/QuickGO/term/GO:0045143>)
 GO:0030473 : nuclear migration along microtubule (<https://www.ebi.ac.uk/QuickGO/term/GO:0030473>)
 GO:0090316 : positive regulation of intracellular protein transport (<https://www.ebi.ac.uk/QuickGO/term/GO:0090316>)

GO - Cellular Component

GO:0005737 : cytoplasm (<https://www.ebi.ac.uk/QuickGO/term/GO:0005737>)
 GO:0005874 : microtubule (<https://www.ebi.ac.uk/QuickGO/term/GO:0005874>)
 GO:0005816 : spindle pole body (<https://www.ebi.ac.uk/QuickGO/term/GO:0005816>)
 GO:0005881 : cytoplasmic microtubule (<https://www.ebi.ac.uk/QuickGO/term/GO:0005881>)
 GO:0005828 : kinetochore microtubule (<https://www.ebi.ac.uk/QuickGO/term/GO:0005828>)
 GO:0005880 : nuclear microtubule (<https://www.ebi.ac.uk/QuickGO/term/GO:0005880>)
 GO:0045298 : tubulin complex (<https://www.ebi.ac.uk/QuickGO/term/GO:0045298>)

Presumptive Null

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

Phe200Tyr

Experimental Evidence

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

	Taxon A	Taxon B	Position
Codon	TTC	TAC	-
Amino-acid	Phe	Tyr	200

Main Reference

Mutations of the β -tubulin gene associated with different phenotypes of benzimidazole resistance in the cereal eyespot fungi *Tapesia yallundae* and *Tapesia acuformis*. (1999)
<https://pubmed.ncbi.nlm.nih.gov/00000000.000008>

Authors

Albertini Catherine; Gredt Michel; Leroux Pierre

Abstract

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Additional References

RELATED GEPHE

Related Genes

No matches found.

Related Haplotypes

3 (<https://www.gephebase.org/search-criteria?/or+Gene Gephebase=^beta-tubulin^/and+Taxon ID=^110162^/or+Gene Gephebase=^beta-tubulin^/and+Taxon ID=^110162^#gephebase-summary-title>)

EXTERNAL LINKS

COMMENTS

Effect of the amino acid change tested in *C. elegans*

