

GEPHE SUMMARY

Gephebase Gene

beta-tubulin

Entry Status

Published

GepheID

GP00001821

Main curator

Courtier

PHENOTYPIC CHANGE

Trait Category

Physiology

Trait

Xenobiotic resistance (benzimidazole)

Trait State in Taxon A

sensitive

Trait State in Taxon B

resistant

Ancestral State

Taxon A

Taxonomic Status

Intraspecific

Taxon A

Latin Name

Oculimacula yallundae

Common Name

-

Synonyms

Helgardia herpotrichoides; Mollisia yallundae; Pseudocercospora herpotrichoides; Ramulispora herpotrichoides; Tapesia yallundae; Oculimacula yallundae (Wallwork & Spooner) Crous & W. Gams, 2003; CBS 110665; CBS H-23003; CBS:110665; CBS:H:23003; Oculimacula yallunda

Rank

species

Lineage

cellular organisms; Eukaryota; Opisthokonta; Fungi; Dikarya; Ascomycota; saccharomyceta; Pezizomycotina; leotiomyceta; sordariomyceta; Leotiomycetes; Helotiales; Ploettnerulaceae; Oculimacula

Parent

Oculimacula () - (Rank: genus)

NCBI Taxonomy ID

86028

is Taxon A an Intraspecies?

No

Taxon B

Latin Name

Oculimacula yallundae

Common Name

-

Synonyms

Helgardia herpotrichoides; Mollisia yallundae; Pseudocercospora herpotrichoides; Ramulispora herpotrichoides; Tapesia yallundae; Oculimacula yallundae (Wallwork & Spooner) Crous & W. Gams, 2003; CBS 110665; CBS H-23003; CBS:110665; CBS:H:23003; Oculimacula yallunda

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is Taxon B an Intraspecies?

No

GENOTYPIC CHANGE

Generic Gene Name

TUB2

Synonyms

ARM10; SHE8; YFL037W

String

4932.YFL037W

Sequence Similarities

Belongs to the tubulin family.

GO - Molecular Function

GO:0005525 : GTP binding

GO:0003924 : GTPase activity

GO:0005200 : structural constituent of cytoskeleton

GO - Biological Process

GO:0007010 : cytoskeleton organization

GO:0000278 : mitotic cell cycle

GO:0000070 : mitotic sister chromatid segregation

GO:0007017 : microtubule-based process

UniProtKB Saccharomyces cerevisiae (strain ATCC 204508 / S288c)

P02557

GenebankID or UniProtKB

GO:0046677 : response to antibiotic
GO:0000226 : microtubule cytoskeleton organization
GO:0045143 : homologous chromosome segregation
GO:0030473 : nuclear migration along microtubule
GO:0090316 : positive regulation of intracellular protein transport

GO - Cellular Component

GO:0005737 : cytoplasm
GO:0005874 : microtubule
GO:0005816 : spindle pole body
GO:0005881 : cytoplasmic microtubule
GO:0005828 : kinetochore microtubule
GO:0005880 : nuclear microtubule
GO:0045298 : tubulin complex

Presumptive Null

Unknown

Molecular Type

Coding

Aberration Type

SNP

SNP Coding Change

Nonsynonymous

Molecular Details of the Mutation

Phe200Tyr

Experimental Evidence

Candidate Gene

	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)

Authors

Albertini Catherine; Gredt Michel; Leroux Pierre

Abstract

-

Additional References

RELATED GEPHE

Related Genes

No matches found.

Related Haplotypes

4

EXTERNAL LINKS

COMMENTS

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

