

GEPHE SUMMARY

Gephebase Gene

[beta-tubulin](#)

Entry Status

Published

GepheID

GP00001797

Main curator

Courtier

PHENOTYPIC CHANGE

Trait Category

[Physiology](#)

Trait

[Xenobiotic resistance \(benomyl\)](#)

Trait State in Taxon A

sensitive

Trait State in Taxon B

resistant

Ancestral State

Taxon A

Taxonomic Status

[Intraspecific](#)

	Taxon A		Taxon B
<i>Latin Name</i>	-	<i>Latin Name</i>	-
Common Name	-	Common Name	-
Synonyms	-	Synonyms	-
Rank	-	Rank	-
Lineage	-	Lineage	-
Parent	-	Parent	-
NCBI Taxonomy ID	415593	NCBI Taxonomy ID	415593
is Taxon A an Intraspecies?	No	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

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

UniProtKB *Saccharomyces cerevisiae* (strain ATCC 204508 / S288c)

[P02557](#)

[GenebankID](#) or [UniProtKB](#)

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

No

Molecular Type

Coding

Aberration Type

SNP

SNP Coding Change

Nonsynonymous

Molecular Details of the Mutation

Glu198Ala

Experimental Evidence

Candidate Gene

	Taxon A	Taxon B	Position
Codon	GAG	GCG	-
Amino-acid	Glu	Ala	198

Main Reference

Characterization of mutations in the beta-tubulin gene of benomyl-resistant field strains of *Venturia inaequalis* and other plant pathogenic fungi. .

Authors

Koenraadt Harrie; Somerville Shauna C; Jones AL

Abstract

-

Additional References

Mechanism of action of N-phenylcarbamates in benzimidazole-resistant *Neurospora* strains . (1990)

RELATED GEPHE

Related Genes

No matches found.

Related Haplotypes

1

EXTERNAL LINKS

COMMENTS

The amino acid change Glu198Gly was shown to confer resistance in *Neurospora crassa* @& taxon A and Taxon B is *Venturia pyrina*