GEPHE SUMMARY

Gephebase Gene
VvMYBA1 (https://www.gephebase.org/search-criteria?/and+Gene Gephebase=^VvMYBA1^#gephebase-summary-title)

GepheID
GP00001194

Entry Status
Published

Main curator
Martin

PHENOTYPIC CHANGE

Trait Category
Morphology (https://www.gephebase.org/search-criteria?/and+Trait Category=^Morphology^#gephebase-summary-title)

Trait
Coloration (fruit) (https://www.gephebase.org/search-criteria?/and+Trait=^Coloration (fruit)^#gephebase-summary-title)

Trait State in Taxon A
Vitis vinifera - white-skinned cultivar - VvmybA1a allele

Trait State in Taxon B
Vitis vinifera - red-skinned cultivar - VvmybA1b allele

Ancestral State
Taxon A

Taxonomic Status
Domesticated (https://www.gephebase.org/search-criteria?/and+Taxonomic Status=^Domesticated^#gephebase-summary-title)

Taxon A

Latin Name
Vitis vinifera (https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Vitis vinifera^#gephebase-summary-title)

Common Name
wine grape

Synonyms
Vitis vinifera subsp. vinifera; wine grape; Vitis vinifera L.

Rank
species

Lineage
cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliophyta; Mesangiospermae; eudicotyledons; Gunneridae; Pentapetalae; rosids; rosids incertae sedis; Vitales; Vitaceae; Viteae; Vitis

Parent
Vitis () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 3603)

NCBI Taxonomy ID
29760 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 29760)

is Taxon A an Infraspecies?
No

Taxon B

Latin Name
Vitis vinifera (https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Vitis vinifera^#gephebase-summary-title)

Common Name
wine grape

Synonyms
Vitis vinifera subsp. vinifera; wine grape; Vitis vinifera L.

Rank
species

Lineage
cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliophyta; Mesangiospermae; eudicotyledons; Gunneridae; Pentapetalae; rosids; rosids incertae sedis; Vitales; Vitaceae; Viteae; Vitis

Parent
Vitis () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 3603)

NCBI Taxonomy ID
29760 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 29760)

is Taxon B an Infraspecies?
Yes

Taxon B Description
cv. â€˜Ruby Okuyamaâ€™ and cv. â€˜Flame Muscatâ€™

GENOTYPIC CHANGE

Generic Gene Name
VvmybA1

Synonyms
mybA; MybA3; mybA1; VVMYBA1; VvmybA3; MYBA1; VIT_02s0033g00410

String
29760.VIT_02s0033g00410.t01 (http://string-db.org/newstring_cgi/show_network_section.pl?identifier=29760.VIT_02s0033g00410.t01)

Sequence Similarities
-

GO - Molecular Function
GO:0003677 : DNA binding (https://www.ebi.ac.uk/QuickGO/term/GO:0003677)

GO - Biological Process
-

GO - Cellular Component
GO:0005634 : nucleus (https://www.ebi.ac.uk/QuickGO/term/GO:0005634)

UniProtKB Vitis vinifera
Q6L973 (http://www.uniprot.org/uniprot/Q6L973)

GenebankID or UniProtKB
FN596505 (https://www.ncbi.nlm.nih.gov/nuccore/FN596505)

Presumptive Null

No (https://www.gephebase.org/search-criteria?/and+Presumptive Null=^No^#gephebase-summary-title)

Molecular Type

Cis-regulatory (https://www.gephebase.org/search-criteria?/and+Molecular Type=^Cis-regulatory^#gephebase-summary-title)

Aberration Type

Deletion (https://www.gephebase.org/search-criteria?/and+Aberration Type=^Deletion^#gephebase-summary-title)

Deletion Size

1-10 kb

Molecular Details of the Mutation

Gret1 retrotransposon deletion; leaving behind its 3′-LTR flanked by 5 bp of a duplicated target site

Experimental Evidence

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

Main Reference

Retrotransposon-induced mutations in grape skin color. (2004) (https://pubmed.ncbi.nlm.nih.gov/15143274)

Authors

Kobayashi S; Goto-Yamamoto N; Hirochika H

Abstract

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Additional References

Structural dynamics at the berry colour locus in V itis vinifera L. somatic variants . (2014) (https://pubmed.ncbi.nlm.nih.gov/00000000.000020)

RELATED GEPHE

Related Genes

3 (VvMybA1 VvMybA2 VvMybA3 and VvMybA4, VvMYBA2, VvMYBA3) (https://www.gephebase.org/search-criteria?/or+Taxon ID=^29760^/and+Trait=Coloration/and+groupHaplotypes=true#gephebase-summary-title)

Related Haplotypes

5 (https://www.gephebase.org/search-criteria?/or+Gene Gephebase=^VvMYBA1^/and+Taxon ID=^29760^/or+Gene Gephebase=^VvMYBA1^/and+Taxon ID=^29760^#gephebase-summary-title)

EXTERNAL LINKS

COMMENTS

@TE