

## GEPHE SUMMARY

BADH2 ( <a href="https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=^BADH2^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=^BADH2^#gephebase-summary-title</a> )	Gephebase Gene	GP00001772	GepheID
Published	Entry Status	Courtier	Main curator

## PHENOTYPIC CHANGE

Physiology ( <a href="https://www.gephebase.org/search-criteria?/and+Trait+Category=^Physiology^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Trait+Category=^Physiology^#gephebase-summary-title</a> )	Trait Category		
Fragrance ( <a href="https://www.gephebase.org/search-criteria?/and+Trait=^Fragrance^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Trait=^Fragrance^#gephebase-summary-title</a> )	Trait		
Oryza sativa - non-fragrant	Trait State in Taxon A		
Oryza sativa fragrant - varieties Suyunuo, Wuxiangjing, Pangxiegu, Xiangxuenuo, XiangjingT37, Wuxiang075, Xiangjing20â€™18, Basmati385, Basmati370, Ganxiangnuo, Meiguomolixiang, Guanglingxiangnuo	Trait State in Taxon B		
	Ancestral State		
	Taxonomic Status		
Domesticated ( <a href="https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=^Domesticated^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=^Domesticated^#gephebase-summary-title</a> )			
	Taxon A	Taxon B	
Oryza sativa ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Oryza+sativa^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Oryza+sativa^#gephebase-summary-title</a> )	Latin Name	Oryza sativa ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Oryza+sativa^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Oryza+sativa^#gephebase-summary-title</a> )	Latin Name
rice	Common Name	rice	Common Name
rice; red rice; Oryza sativa L.	Synonyms	rice; red rice; Oryza sativa L.	Synonyms
species	Rank	species	Rank
cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliophyta; Mesangiospermae; Liliopsida; Petrosaviidae; commelinids; Poales; Poaceae; BOP clade; Oryzoideae; Oryzaceae; Oryzinae; Oryza	Lineage	cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliophyta; Mesangiospermae; Liliopsida; Petrosaviidae; commelinids; Poales; Poaceae; BOP clade; Oryzoideae; Oryzaceae; Oryzinae; Oryza	Lineage
Oryza () - (Rank: genus) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4527">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4527</a> )	Parent	Oryza () - (Rank: genus) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4527">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4527</a> )	Parent
4530 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4530">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4530</a> )	NCBI Taxonomy ID	4530 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4530">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4530</a> )	NCBI Taxonomy ID
No	is Taxon A an Infrasppecies?	Yes	is Taxon B an Infrasppecies?
			Taxon B Description
			Suyunuo, Wuxiangjing, Pangxiegu, Xiangxuenuo, XiangjingT37, Wuxiang075, Xiangjing20â€™18, Basmati385, Basmati370, Ganxiangnuo, Meiguomolixiang, Guanglingxiangnuo

## GENOTYPIC CHANGE

BADH2	Generic Gene Name	UniProtKB Oryza sativa subsp. japonica
fgr; BADH2; OsBADH2; OsJ_27367; LOC_Os08g32870; Os08g0424500; OSJNBa0056L09.30; P0456B03.101	Synonyms	GenebankID or UniProtKB
39947.LOC_Os08g32870.1 ( <a href="http://string-db.org/newstring.cgi/show_network_section.pl?identifier=39947.LOC_Os08g32870.1">http://string-db.org/newstring.cgi/show_network_section.pl?identifier=39947.LOC_Os08g32870.1</a> )	String	ALZ42021 ( <a href="https://www.ncbi.nlm.nih.gov/nucleotide/ALZ42021">https://www.ncbi.nlm.nih.gov/nucleotide/ALZ42021</a> )
Belongs to the aldehyde dehydrogenase family.	Sequence Similarities	
	GO - Molecular Function	

GO:0008802 : betaine-aldehyde dehydrogenase activity  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0008802>)

GO - Biological Process

GO:0071454 : cellular response to anoxia  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0071454>)

GO:0019285 : glycine betaine biosynthetic process from choline  
(<https://www.ebi.ac.uk/QuickGO/term/GO:0019285>)

GO - Cellular Component

GO:0005737 : cytoplasm (<https://www.ebi.ac.uk/QuickGO/term/GO:0005737>)  
GO:0005777 : peroxisome (<https://www.ebi.ac.uk/QuickGO/term/GO:0005777>)

Presumptive Null

Yes ([https://www.gephebase.org/search-criteria?/and+Presumptive Null=^Yes^#gephebase-summary-title](https://www.gephebase.org/search-criteria?/and+Presumptive+Null=^Yes^#gephebase-summary-title))

Molecular Type

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

Aberration Type

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

Deletion Size

1-9 bp

Molecular Details of the Mutation

7-bp deletion in exon 2 resulting in premature stop codon

Experimental Evidence

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

Main Reference

Discovery of a new fragrance allele and the development of functional markers for the breeding of fragrant rice varieties . (2008 ) (<https://pubmed.ncbi.nlm.nih.gov/00000000.000002>)

Authors

Shi Weiwei; Yang Yi; Chen Saihua; Xu Mingliang

Abstract

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Additional References

The origin and evolution of fragrance in rice (*Oryza sativa* L.). (2009) (<https://pubmed.ncbi.nlm.nih.gov/19706531>)

## RELATED GEPHE

Related Genes

No matches found.

Related Haplotypes

9 ([https://www.gephebase.org/search-criteria?/or+Gene Gephebase=^BADH2^/and+Taxon ID=^4530^/or+Gene Gephebase=^BADH2^/and+Taxon ID=^4530^#gephebase-summary-title](https://www.gephebase.org/search-criteria?/or+Gene+Gephebase=^BADH2^/and+Taxon+ID=^4530^/or+Gene+Gephebase=^BADH2^/and+Taxon+ID=^4530^#gephebase-summary-title))

## EXTERNAL LINKS

## COMMENTS