

GEPHE SUMMARY

EPSPS ( <a href="https://www.gephebase.org/search-criteria?/and+GeneGephebase=^EPSPS^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+GeneGephebase=^EPSPS^#gephebase-summary-title</a> )	Gephebase Gene	GP00001901	GepheID
Published	Entry Status	Courtier	Main curator

PHENOTYPIC CHANGE

Physiology ( <a href="https://www.gephebase.org/search-criteria?/and+TraitCategory=^Physiology^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+TraitCategory=^Physiology^#gephebase-summary-title</a> )	Trait Category		
Xenobiotic resistance (herbicides; glyphosate) ( <a href="https://www.gephebase.org/search-criteria?/and+Trait=^Xenobiotic resistance (herbicides; glyphosate)^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Trait=^Xenobiotic resistance (herbicides; glyphosate)^#gephebase-summary-title</a> )	Trait		
Lolium rigidum - sensitive	Trait State in Taxon A		
Lolium rigidum - resistant	Trait State in Taxon B		
Taxon A	Ancestral State		
Intraspecific ( <a href="https://www.gephebase.org/search-criteria?/and+TaxonomicStatus=^Intraspecific^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+TaxonomicStatus=^Intraspecific^#gephebase-summary-title</a> )	Taxonomic Status		
	Taxon A		Taxon B
	Latin Name		Latin Name
Lolium rigidum ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Lolium rigidum^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Lolium rigidum^#gephebase-summary-title</a> )		Lolium rigidum ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Lolium rigidum^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Lolium rigidum^#gephebase-summary-title</a> )	
-	Common Name	-	Common Name
	Synonyms		Synonyms
Lolium rigidum Gaudin; Lolium rigidum		Lolium rigidum Gaudin; Lolium rigidum	
species	Rank	species	Rank
	Lineage		Lineage
cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliopsida; Mesangiospermae; Liliopsida; Petrosaviidae; commelinids; Poales; Poaceae; BOP clade; Pooideae; Poodae; Poeae; Poeae Chloroplast Group 2 (Poeae type); Loliinae; Lolium		cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliopsida; Mesangiospermae; Liliopsida; Petrosaviidae; commelinids; Poales; Poaceae; BOP clade; Pooideae; Poodae; Poeae; Poeae Chloroplast Group 2 (Poeae type); Loliinae; Lolium	
	Parent		Parent
Lolium () - (Rank: genus) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 4520">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 4520</a> )		Lolium () - (Rank: genus) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 4520">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 4520</a> )	
89674 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 89674">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 89674</a> )	NCBI Taxonomy ID	89674 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 89674">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 89674</a> )	NCBI Taxonomy ID
No	is Taxon A an Intraspecies?	Yes	is Taxon B an Intraspecies?
			Taxon B Description
		a population from South Africa	

GENOTYPIC CHANGE

At2g45300	Generic Gene Name	P05466 ( <a href="http://www.uniprot.org/uniprot/P05466">http://www.uniprot.org/uniprot/P05466</a> )	UniProtKB Arabidopsis thaliana
F4L23.19; At2g45300	Synonyms	0	GenebankID or UniProtKB
3702.AT2G45300.1 ( <a href="http://string-db.org/newstring.cgi/show_network_section.pl?identifier= 3702.AT2G45300.1">http://string-db.org/newstring.cgi/show_network_section.pl?identifier= 3702.AT2G45300.1</a> )	String		
Belongs to the EPSP synthase family.	Sequence Similarities		
GO:0003866 : 3-phosphoshikimate 1-carboxyvinyltransferase activity ( <a href="https://www.ebi.ac.uk/QuickGO/term/GO:0003866">https://www.ebi.ac.uk/QuickGO/term/GO:0003866</a> )	GO - Molecular Function		
GO:0009073 : aromatic amino acid family biosynthetic process	GO - Biological Process		

(<https://www.ebi.ac.uk/QuickGO/term/GO:0009073>)

GO:0009423 : chorismate biosynthetic process

(<https://www.ebi.ac.uk/QuickGO/term/GO:0009423>)

GO - Cellular Component

GO:0009507 : chloroplast (<https://www.ebi.ac.uk/QuickGO/term/GO:0009507>)

GO:0009570 : chloroplast stroma (<https://www.ebi.ac.uk/QuickGO/term/GO:0009570>)

Presumptive Null

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

Molecular Type

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

Aberration Type

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

SNP Coding Change

Nonsynonymous

Molecular Details of the Mutation

Pro106Ser

Experimental Evidence

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

	Taxon A	Taxon B	Position
Codon	-	-	-
Amino-acid	-	-	-

Main Reference

Rigid ryegrass (*Lolium rigidum*) populations containing a target site mutation in EPSPS and reduced glyphosate translocation are more resistant to glyphosate . (2012 )

(<https://pubmed.ncbi.nlm.nih.gov/00000000.000015>)

Authors

Bostamam Yazid; Malone Jenna M; Dolman Fleur C; Boutsalis Peter; Preston Christopher

Abstract

-

Additional References

## RELATED GEPHE

Related Genes

No matches found.

Related Haplotypes

3 ([#gpepbase-summary-title](https://www.gephebase.org/search-criteria?/or+Gene+Gephebase+EPSPS+/and+Taxon+ID+89674+/or+Gene+Gephebase+EPSPS+/and+Taxon+ID+89674))

## EXTERNAL LINKS

## COMMENTS