

GEPHE SUMMARY

	Gephebase Gene	Gephebase Gene	GephelD
Frigida (FRI) (https://www.gephebase.org/search-criteria/?and+Gene+Gephebase=%Frigida(FRI)%#gephebase-summary-title)	GP00000357		Main curator
	Entry Status	Martin	
Published			

PHENOTYPIC CHANGE

	Trait Category		
Physiology (https://www.gephebase.org/search-criteria/?and+Trait+Category=%Physiology%#gephebase-summary-title)		Trait	
Flowering time (https://www.gephebase.org/search-criteria/?and+Trait=%Flowering+time%#gephebase-summary-title)	Trait State in Taxon A		
Arabidopsis thaliana	Trait State in Taxon B		
Arabidopsis thaliana Col accession	Ancestral State		
Taxon A	Taxonomic Status		
Intraspecific (https://www.gephebase.org/search-criteria/?and+Taxonomic+Status=%Intraspecific%#gephebase-summary-title)			
Taxon A	Latin Name	Taxon B	Latin Name
Arabidopsis thaliana (https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=%Arabidopsis+thaliana%#gephebase-summary-title)		Arabidopsis thaliana (https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=%Arabidopsis+thaliana%#gephebase-summary-title)	
thale cress	Common Name	thale cress	Common Name
thale cress; mouse-ear cress; thale-cress; Arabidopsis thaliana (L.) Heynh.; Arabidopsis thaliana (thale cress); Arabidopsis_thaliana; Arbisopsis thaliana; thale kress	Synonyms	thale cress; mouse-ear cress; thale-cress; Arabidopsis thaliana (L.) Heynh.; Arabidopsis thaliana (thale cress); Arabidopsis_thaliana; Arbisopsis thaliana; thale kress	Synonyms
species	Rank	species	Rank
cellular organisms; Eukaryota; Viriplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliophyta; Mesangiospermae; eudicotyledons; Gunneridae; Pentapetalae; rosids; malvids; Brassicales; Brassicaceae; Camelinae; Arabidopsis	Lineage	cellular organisms; Eukaryota; Viriplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliophyta; Mesangiospermae; eudicotyledons; Gunneridae; Pentapetalae; rosids; malvids; Brassicales; Brassicaceae; Camelinae; Arabidopsis	Lineage
Arabidopsis () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=3701)	Parent	Arabidopsis () - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=3701)	Parent
3702 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=3702)	NCBI Taxonomy ID	3702 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=3702)	NCBI Taxonomy ID
No	is Taxon A an Infraspecies?	Yes	is Taxon B an Infraspecies?
		Arabidopsis thaliana Col accession	Taxon B Description

GENOTYPIC CHANGE

FRI	Generic Gene Name	UniProtKB Arabidopsis thaliana
-	Synonyms	GenebankID or UniProtKB
-	String	
Belongs to the Frigida family.	Sequence Similarities	
-	GO - Molecular Function	
	GO - Biological Process	
GO:0030154 : cell differentiation (https://www.ebi.ac.uk/QuickGO/term/GO:0030154)		
GO:0009908 : flower development (https://www.ebi.ac.uk/QuickGO/term/GO:0009908)		
GO:0016607 : nuclear speck (https://www.ebi.ac.uk/QuickGO/term/GO:0016607)	GO - Cellular Component	

Yes (#gephebase-summary-title)	Presumptive Null
Coding (#gephebase-summary-title)	Molecular Type
Deletion (#gephebase-summary-title)	Aberration Type
10-99 bp	Deletion Size
16bp deletion aa313-318 in exon 2 and premature stop codon	Molecular Details of the Mutation
Linkage Mapping (#gephebase-summary-title)	Experimental Evidence
Molecular analysis of FRIGIDA, a major determinant of natural variation in <i>Arabidopsis</i> flowering time. (2000) (https://pubmed.ncbi.nlm.nih.gov/11030654)	Main Reference
Johanson U; West J; Lister C; Michaels S; Amasino R; Dean C	Authors
Vernalization, the acceleration of flowering by a long period of cold temperature, ensures that many plants overwinter vegetatively and flower in spring. In <i>Arabidopsis</i> , allelic variation at the FRIGIDA (FRI) locus is a major determinant of natural variation in flowering time. Dominant alleles of FRI confer late flowering, which is reversed to earliness by vernalization. We cloned FRI and analyzed the molecular basis of the allelic variation. Most of the early-flowering ecotypes analyzed carry FRI alleles containing one of two different deletions that disrupt the open reading frame. Loss-of-function mutations at FRI have thus provided the basis for the evolution of many early-flowering ecotypes.	Abstract
	Additional References

RELATED GEPHE

12 (AGAMOUS-LIKE 50, Cryptochrome 2 (CRY2) EDI allele, EARLY FLOWERING 3(ELF3), FLC (Flowering Locus C), FLM (MAF1), Flowering locus T (FT), Frigida like 1 (FRL1), Frigida like 2 (FRL2), MADS AFFECTING FLOWERING 2 (MAF2), SVP (SHORT VEGETATIVE PHASE), VIN3, HUA2) (#gephebase-summary-title)	Related Genes
18 (#gephebase-summary-title)	Related Haplotypes

EXTERNAL LINKS

COMMENTS