

GEPHE SUMMARY

Gephebase Gene		GepheID
Frigida (FRI) (<a +frigida+(fri)^#gephebase-summary-title"="" href="https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=">https://www.gephebase.org/search-criteria?/and+Gene+Gephebase="+Frigida+(FRI)^#gephebase-summary-title)	GP00000358	
Entry Status		Main curator
Published		

PHENOTYPIC CHANGE

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

GENOTYPIC CHANGE

Generic Gene Name		UniProtKB Arabidopsis thaliana
FRI		P0DH90 (http://www.uniprot.org/uniprot/P0DH90)
Synonyms		GenebankID or UniProtKB
-		AF228499 (https://www.ncbi.nlm.nih.gov/nucleotide/AF228499)
String		
-		
Sequence Similarities		
Belongs to the Frigida family.		
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 - Cellular Component		
GO:0016607 : nuclear speck (https://www.ebi.ac.uk/QuickGO/term/GO:0016607)		

Yes (https://www.gephebase.org/search-criteria?/and+Presumptive Null=~Yes^#gephebase-summary-title)	Presumptive Null
Coding (https://www.gephebase.org/search-criteria?/and+Molecular Type=~Coding^#gephebase-summary-title)	Molecular Type
Indel (https://www.gephebase.org/search-criteria?/and+Aberration Type=~Indel^#gephebase-summary-title)	Aberration Type
100-999 bp	Indel Size
376 bp deletion and 31 bp insertion that delete amino acid 1-15 and at best produce a 45-aa protein	Molecular Details of the Mutation
Linkage Mapping (https://www.gephebase.org/search-criteria?/and+Experimental Evidence=~Linkage Mapping^#gephebase-summary-title)	Experimental Evidence
Molecular analysis of FRIGIDA, a major determinant of natural variation in Arabidopsis 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 Arabidopsis, 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
Role of FRIGIDA and FLOWERING LOCUS C in determining variation in flowering time of Arabidopsis. (2005) (https://pubmed.ncbi.nlm.nih.gov/15908596)	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) (https://www.gephebase.org/search-criteria?/or+Taxon ID=~3702^/and+Trait=Flowering time/and+groupHaplotypes=true#gephebase-summary-title)	Related Genes
18 (https://www.gephebase.org/search-criteria?/or+Gene Gephebase=~Frigida (FRI)^/and+Taxon ID=~3702^/or+Gene Gephebase=~Frigida (FRI)^/and+Taxon ID=~3702^#gephebase-summary-title)	Related Haplotypes

EXTERNAL LINKS

COMMENTS