

FW2.2 (https://www.gephebase.org/search-criteria?/and+GeneGephebase=^FW2.2^#gephebase-summary-title)	Gephebase Gene	GP00000383	GepheID
Published	Entry Status	Martin	Main curator

	Trait Category
Morphology (https://www.gephebase.org/search-criteria?/and+Trait+Category=^Morphology^#gephebase-summary-title)	Trait
Fruit size (https://www.gephebase.org/search-criteria?/and+Trait=^Fruit size^#gephebase-summary-title)	Trait
Lycopersicon esculentum; Lycopersicon pennellii	Trait State in Taxon A
Solanum lycopersicum	Trait State in Taxon B
Data not curated	Ancestral State
Domesticated (https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=^Domesticated^#gephebase-summary-title)	Taxonomic Status

ORFX	Generic Gene Name	UniProtKB Solanum lycopersicum
	Synonyms	Q9LKV7 (http://www.uniprot.org/uniprot/Q9LKV7)
ORFX; 101245309		GenebankID or UniProtKB
	String	AY097179 (https://www.ncbi.nlm.nih.gov/nucore/AY097179)
4081.Solyc02g090730.2.1 (http://string-db.org/newstring.cgi/show_network_section.pl?identifier=4081.Solyc02g090730.2.1)		
	Sequence Similarities	
-		
	GO - Molecular Function	
-		
	GO - Biological Process	
-		
	GO - Cellular Component	

-	Presumptive Null
Unknown (https://www.gephebase.org/search-criteria?/and+Presumptive Null=~Unknown^#gephebase-summary-title)	Molecular Type
Cis-regulatory (https://www.gephebase.org/search-criteria?/and+Molecular Type=~Cis-regulatory^#gephebase-summary-title)	Aberration Type
Unknown (https://www.gephebase.org/search-criteria?/and+Aberration Type=~Unknown^#gephebase-summary-title)	Molecular Details of the Mutation
Not identified	Experimental Evidence
Linkage Mapping (https://www.gephebase.org/search-criteria?/and+Experimental Evidence=~Linkage Mapping^#gephebase-summary-title)	Main Reference
fw2.2: a quantitative trait locus key to the evolution of tomato fruit size. (2000) (https://pubmed.ncbi.nlm.nih.gov/10884229)	Authors
Frary A; Nesbitt TC; Grandillo S; Knaap E; Cong B; Liu J; Meller J; Elber R; Alpert KB; Tanksley SD	Abstract
Domestication of many plants has correlated with dramatic increases in fruit size. In tomato, one quantitative trait locus (QTL), fw2.2, was responsible for a large step in this process. When transformed into large-fruited cultivars, a cosmid derived from the fw2.2 region of a small-fruited wild species reduced fruit size by the predicted amount and had the gene action expected for fw2.2. The cause of the QTL effect is a single gene, ORFX, that is expressed early in floral development, controls carpel cell number, and has a sequence suggesting structural similarity to the human oncogene c-H-ras p21. Alterations in fruit size, imparted by fw2.2 alleles, are most likely due to changes in regulation rather than in the sequence and structure of the encoded protein.	
Comparative sequencing in the genus Lycopersicon. Implications for the evolution of fruit size in the domestication of cultivated tomatoes. (2002) (https://pubmed.ncbi.nlm.nih.gov/12242247)	Additional References

RELATED GEPHE

2 (CLV3, fasciated) (https://www.gephebase.org/search-criteria?/or+Taxon ID=~49274^/and+Trait=Fruit size/or+Taxon ID=~4081^/and+Trait=Fruit size/and+groupHaplotypes=true#gephebase-summary-title)	Related Genes
No matches found.	Related Haplotypes

EXTERNAL LINKS

COMMENTS