

## IDENTIFICATION

**Species:** *Helianthus annuus*

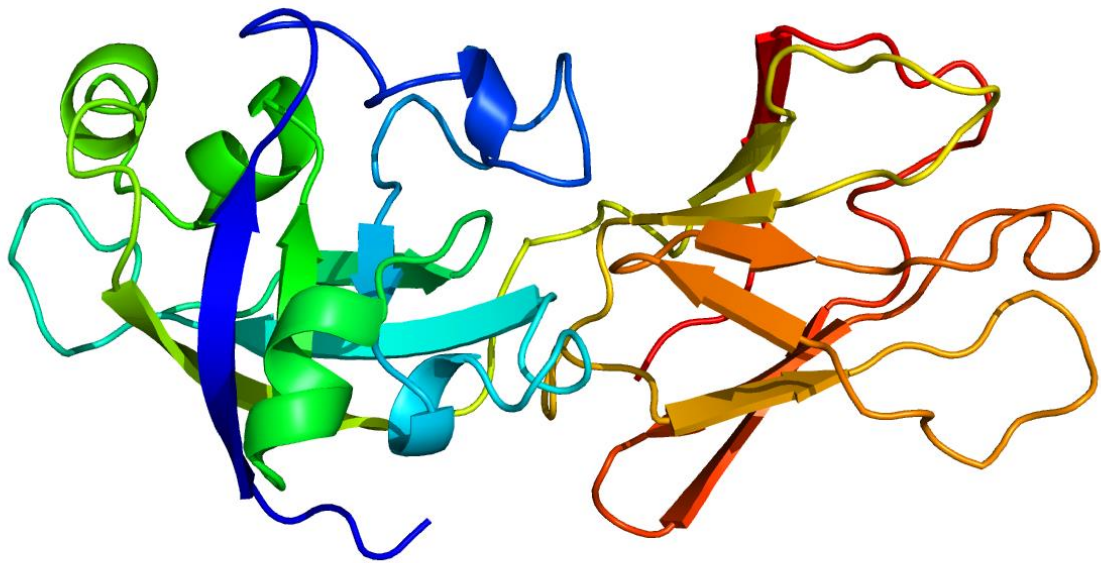
**Locus:** HanXRQChr09g0252151

**Gene Model:** HanXRQChr09g0252151

**Description:** HanEXPB-02

**Family:** Beta Expansin

**3D structure:**



## GENOME DATABASES

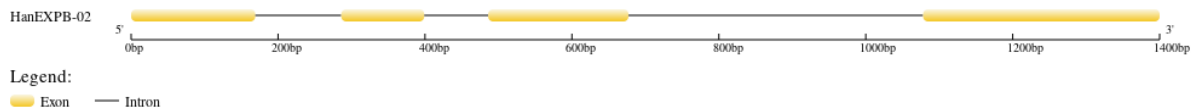
Phytozome: [https://phytozome-next.jgi.doe.gov/info/Hannuus\\_r1\\_2](https://phytozome-next.jgi.doe.gov/info/Hannuus_r1_2)

KEGG: <https://www.genome.jp/entry/T05101>

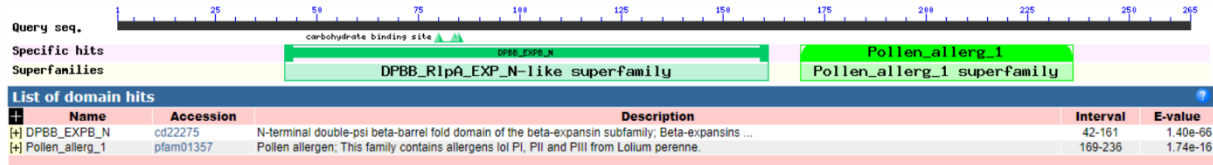
## EXTERNAL RESOURCES

<https://www.heliagene.org/>

## GENE STRUCTURE



## DOMAIN ARCHITECTURE



## SEQUENCES

### Peptide

>HanEXPB-02

MAFNLKTVLSIFISVCLVSSHFANRCLCSIPTFFVNGGGFTPALGTWYGDPNGAGSGG  
ACGWADDVRLPPFSSMIAAGNANIFLQKGCCECYQIKCSREPYCSGNPITVTITDEC  
PGACNDVPFHFDLSGAAFGAMANPGQADNLRNLGQVDIQFQRVPCNYGRTNIAFKID  
AGTNPNWFA TRIEFTEGDGGLRSVEIAPAGTQEFVPMNNIWGA VVWANIDSSFKGPY  
SFRLTSPINAVAVAINAVPMDYVPGQTYFSNVNF\*

### CDS (coding sequence)

>HanEXPB-02

ATGGCATTCAACCTCAAAACAGTTTTATCTATTTTCATTTCTGTGTGTTTAGTTTCT  
AGTCATTTTGCAAATCGTTGCCTCTGTTCAATCCCTACATTCTTTGTAAATGGAGG  
TGGTTTTACACCTGCATTAGGAACATGGTATGGAGATCCCAATGGTGCTGGAAGT  
GGAGGAGCCTGTGGATGGGCTGATGATGTGAGGTTACCTCCATTCTCATCTATGA  
TTGCTGCTGGAAATGCAAATATTTTTTTGCAAGGCAAAGGTTGTGGGGAATGTTA  
TCAGATCAAATGCAGCCGGGAACCTTATTGCTCCGGAAATCCAATTACAGTGACG  
ATAACCGATGAATGCCCGGGTGCATGTAATGACGTTCCATTCCATTTTGATCTAA  
GCGGAGCCGCTTTTGGTGCAATGGCGAATCCGGGACAAGCTGACAATCTTCGTAA  
TCTTGGCCAAGTTGACATTCAATTTCAAAGGGTGCCATGCAACTATGGCAGAACT  
AACATTGCTTTCAAGATCGATGCGGGAACAAACCCTAACTGGTTTGCAACCCGAA  
TTGAATTTACGGAAGGAGATGGTGGACTTCGGTCAGTGGAGATCGCACCTGCTGG  
CACACAAGAGTTTGTTCGATGAACAATATTTGGGGTGCGGTTTGGGTAGCCAAC  
ATTGACTCGTCTTTCAAAGGTCCATACTCGTTCAGGCTCACATCTCCAATAAACGC  
GGTCGCAGTTGCTATAAATGCTGTGCCTATGGATTATGTACCTGGCCAACTTATT  
TCTCAAATGTAACTTTTAG

### Nucleotide

>HanEXPB-02

ATGGCATTCAACCTCAAAACAGTTTTATCTATTTTCATTTCTGTGTGTTTAGTTTCT  
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GGTATATATATACATTCACATCTCATTAAATATTAATATATATTATTACTAGTATTG  
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CACAGGAGGAGCCTGTGGATGGGCTGATGATGTGAGGTTACCTCCATTCTCATCT  
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TGGCGAATCCGGGACAAGCTGACAATCTTCGTAATCTTGGCCAAGTTGACATTCA  
ATTTCAAAGGTTGATATATGAGTCCATTAAATCTGTGCATAAGTATATTAAGGCC  
TACTAATCCTACGCCACCCCAAACCTTAAACGTACGTTTAATGGTTGATATATGA  
GTCCATTAAATCTGTGCAAGCTCTAACCTTCAAATGGATGTTTCAGATCATCAAAT  
GGTCGTTGAAAGAAAACGGTGTGAGCTATATATTAATTTCTAAAACCTAAAATACT  
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ACTATCTATTATTCAAACCTAAAGTATAAAAAGATTGTTAACATCACTTAGTTTA  
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TACTGCGGTTTACTGTATGTGTAGGGTGCCATGCAACTATGGCAGAATAACATT  
GCTTTCAAGATCGATGCGGGAACAAACCCTAACTGGTTTGCAACCCGAATTGAAT  
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CAGTTGCTATAAATGCTGTGCCTATGGATTATGTACCTGGCCAAACTTATTTCTCA  
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