

## IDENTIFICATION

**Species:** *Phaseolus vulgaris*

**Locus:** Phvul.009G142800

**Gene Model:** Phvul.009G142800.1.p

**Description:** PvEXPA-21

**Family:** Alpha Expansin

**3D structure:**



## GENOME DATABASES

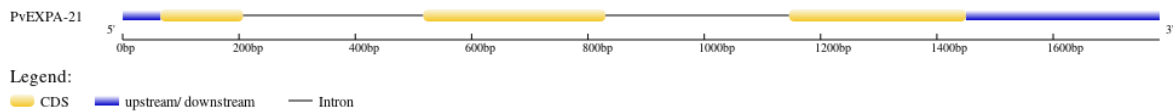
Phytozome: [https://phytozome-next.jgi.doe.gov/info/Pvulgaris\\_v2\\_1](https://phytozome-next.jgi.doe.gov/info/Pvulgaris_v2_1)

KEGG: <https://www.genome.jp/entry/gn:T03093>

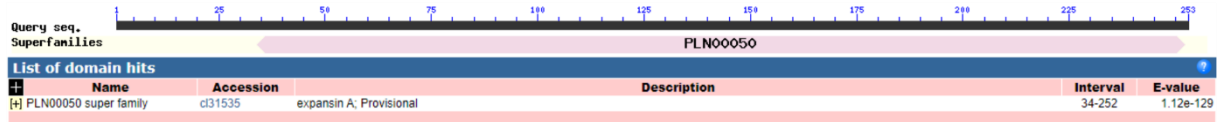
## EXTERNAL RESOURCES

<https://www.pulsedb.org/organism/636>

## GENE STRUCTURE



## DOMAIN ARCHITECTURE



## SEQUENCES

### Peptide

>PvEXPA-21

MAIAATSTILLFFVLNLCLQGTFGDYGGGWQGGHATFYGGGDASGTMGGACGYGN  
LYSQGYGTNTAALSTALFNGLSCGSCYEMRCDSDPRWCLPGSIIVTATNFCPPNFAL  
SNDNGGWCNPPLQHFDLAEP AFLQIAQYKAGIVPVSFRRVSCVKKGGIRFTINGHSYF  
NLVLVTNVGGAGDVHSVSIKGSRTNWQTMSRNWQNWQSN SYLNGQSLSFQVTT  
DGRILTSNNIVPANWQFGQTFEGIQF\*

### CDS (coding sequence)

>PvEXPA-21

ATGGCCATTGCAGCAACCTCTACCATTCTTCTCTTCTTTGTTCTTAATCTATGCCTC  
CAAGGCACTTTTGGTGACTATGGAGGTGGATGGCAAGGTGGTCATGCCACATTCT  
ATGGTGGGGGAGATGCATCAGGCACAATGGGAGGGGCTTGTGGCTATGGCAATT  
TGTACAGCCAAGGGTATGGTACTAACA CTGCAGCACTCAGCACTGCTCTATTCAA  
CAATGGCTTGAGTTGCGGGTCTTGCTATGAGATGAGATGTGACAGTGACCCCA  
TGGTGCCCTCCCCGGTAGCATAATCGTCACTGCCCAA AACTTCTGCCCCCTAACTT  
TGCCTTGTCTAATGACAATGGTGGCTGGTGCAACCCTCCTTTGCAACACTTTGATC  
TTGCTGAGCCTGCTTTCTTACAAATTGCTCAATACAAAGCTGGAATTGTTCCCTGTT  
TCCTTCAGAAGAGTCTCGTGTGTGAAGAAAGGAGGGATCAGGTTACCATCAATG  
GTCACTCATACTTCAACTTGGTTCTGGTCACAAATGTTGGTGGAGCTGGTGATGTT  
CACTCTGTGTCCATCAAGGGGTCTAGGACTAATTGGCAAACCATGTCTAGAACT  
GGGGGCAGAATTGGCAAAGCAACTCTTACCTGAATGGTCAAAGCCTCTCTTTTCA  
GGTGACTACAAGTGATGGCAGAATTCTGACCAGCAACAACATTGTGCCTGCTAAC  
TGGCAATTTGGTCAAACATTTGAAGGGATACAGTTCTAG

### Nucleotide

>PvEXPA-21

CAAGTAAACTTCTCCTATCTTAAATCCTTTGTACCCTCAACTCCCTAATCACTTG  
TACCACACAATGGCCATTGCAGCAACCTCTACCATTCTTCTTCTTTGTTCTTAA  
TCTATGCCTCCAAGGCACTTTTGGTGACTATGGAGGTGGATGGCAAGGTGGTCAT  
GCCACATTCTATGGTGGGGGAGATGCATCAGGCACAATGGGTAGGTTCAAAGTGT  
TTATTTAGGTTTTAGTCTCGCATTACTAAATTTTGCTTATTCTAGTGTTTATATAAC  
TGCACGAAA ACTAACTAAGTTCGAACAAATGTTTTGCCTTTTCCTTTTGGCACAT

ATGAGTGATTAAAATGGAAAAAAGAACTACTTAACTTTGTGGTATTGTGGTGCC  
CGTACATAACCTTGTGTACGGGCACTTACATGTACATTACATTCACACTCTCTCC  
TATTATTGAGTCAAAGATGTTTTCACTTAGGATATGACTCATGATTTTTATTTTTAT  
TTTTATTTTCACAGGAGGGGCTTGTGGCTATGGCAATTTGTACAGCCAAGGGTAT  
GGTACTAACACTGCAGCACTCAGCACTGCTCTATTCAACAATGGCTTGAGTTGCG  
GGTCTTGCTATGAGATGAGATGTGACAGTGACCCAGATGGTGCCTCCCCGGTAG  
CATAATCGTCACTGCCACAACTTCTGCCCCCTAACTTTGCCTTGTCTAATGACA  
ATGGTGGCTGGTGCAACCCTCCTTTGCAACACTTTGATCTTGCTGAGCCTGCTTTC  
TTACAAATTGCTCAATACAAAGCTGGAATTGTTCCCTGTTTCCTTCAGAAGGTAAT  
AAAAAATAAGAAACCCCTTTAAGTATTTTTATTTTTTTCTCCCCTTTTAGCTTTAA  
ACTTTGACTCAGAGGGAGTTAGCTCCTCTGAATAACAAAGGTGAAATAAGTCATT  
CCAGTCTTTATCCAAAACAATCAACCATTTATATAAACACATAGCAAATATATGC  
ACATGTAACATCAGCAGTTGATCTTTCGTGATCAACGACTGGTATTGCACACTTG  
CTCTTCAAAGTAAAAATTGCTGAGTTTGGAAGAGTTGGATCCAACCTGGAGCATA  
CATTAAACATGTTTTTGTTTTTGGCTTAAAACAGAGTCTCGTGTGTGAAGAAAGGA  
GGGATCAGGTTACCATCAATGGTCACTCATACTTCAACTGGTTCTGGTCACAA  
ATGTTGGTGGAGCTGGTGATGTTCACTCTGTGTCCATCAAGGGGTCTAGGACTAA  
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GCAACAACATTGTGCCTGCTAACTGGCAATTTGGTCAAACATTTGAAGGGATACA  
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TGTTGATTGTTGGTTTGTTTTTGTTATAGTTGGAAAGGGTGGGGAAGAGAAAAAAG  
GTAGATTAGGAGGAGTTCTGGCCAACATGGGCCCTAATGCTGTGGTGGCTATATG  
GCACCCGCTAGGACTAATATAATATAAAGTCTTCTATTTTCAGACACATATCAAC  
ACCTTTTGATGAAGTAAAAGGTGCTGCTGATCTTAATTACTTTGTATATCTGATCC  
CCACTATGGTACAAAACCAATTTGGGGTTGAATTAATATCAATTTGATCATGCTTT  
TTTATTGC