

IDENTIFICATION

Species: *Helianthus annuus*

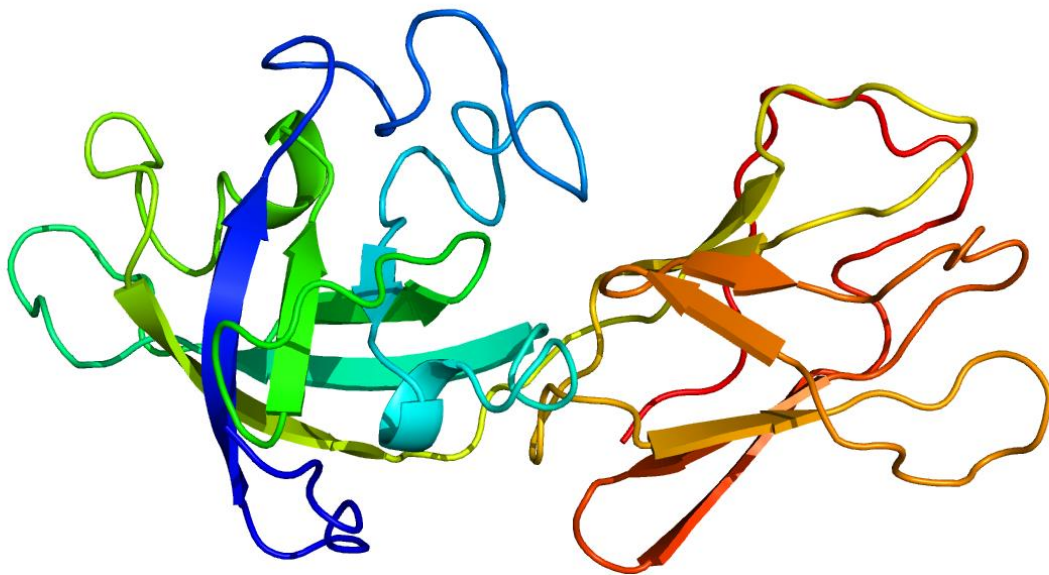
Locus: HanXRQChr08g0220891

Gene Model: HanXRQChr08g0220891

Description: HanEXPA-11

Family: Alpha Expansin

3D structure:



GENOME DATABASES

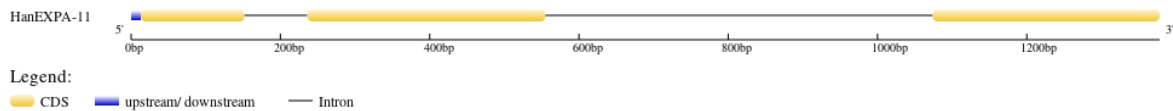
Phytozome: https://phytozome-next.jgi.doe.gov/info/Hannuus_r1_2

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

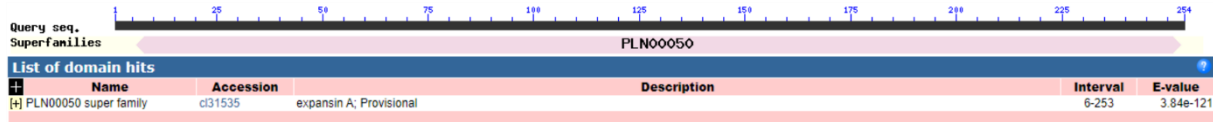
EXTERNAL RESOURCES

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

GENE STRUCTURE



DOMAIN ARCHITECTURE



SEQUENCES

Peptide

>HanEXPA-11

MALSYILILTAVLTSVNALVPGVYTRGPWETAHATFYGGKDASGTMGGACGYGNLY
SQGYGVNTAALSTALFNGLSCGACFELKCVDPEWCHPGSPSIFITATNFCPPNFEQ
PSDNGGWCNPPRAHFDLSMPMFLKIAEYRAGIVPVS YRRVPCRKQGGIRFTINGFRYY
NLVLITNVAGAGDITQAWVKVSKTDWMSLKRNWGQNWQSDEVLIQSLSFKILASD
GRTSISENIVPSNWQFGQTFSGNNF*

CDS (coding sequence)

>HanEXPA-11

ATGGCTTTGTCCTACATTCTCATATTAACAGCGGTTCTGACCTCAGTCAACGCTCT
TGTTCCCGGAGTTTACACCAGAGGCCCGTGGGAAACCGCCCACGCCACCTTCTAC
GGTGGCAAGGATGCATCTGGGACCATGGGTGGAGCATGTGGGTACGGTAACCTG
TACAGCCAAGGGTATGGCGTGAACACTGCGGCGCTAAGTACGGCGCTGTTCAAC
AATGGGCTGAGCTGCGGTGCTTGTTCGAGCTCAAGTGTGTGGATGATCCTGAAT
GGTGTACCCCCGGCAGCCCTTCTATTTTCATCACCGCTACCAATTTCTGCCCGCCA
AACTTTGAACAACCTAGTGATAATGGTGGGTGGTGCAACCCCCCTCGTGCCCATT
TCGACCTTCCATGCCTATGTTTCTCAAGATTGCGGAGTACCGAGCTGGAATCGTC
CCCGTTTCATAACCGCCGGGTGCCATGTCGTAACAAGGAGGGATAAGATTCACCA
TAAACGGTTTTTCGCTACTATAACTTGGTTTTGATCACCAATGTTGCGGGTGCGGGG
GATATCACTCAGGCTTGGGTCAAGGTTTCCAAAACCGATTGGATGAGTCTTAAAA
GAAACTGGGGCCAAAACCTGGCAATCAGATGAGGTGTTGATTGGACAATCACTTTC
GTTCAAGATTTTAGCTAGTGATGGTCGCACTTCCATCTCGGAGAACATAGTACCTT
CTAATTGGCAATTTGGTCAAACCTTTTCCGGAAATAACTTTTGA

Nucleotide

>HanEXPA-11

TTCTACTTCAACAATGGCTTTGTCCTACATTCTCATATTAACAGCGGTTCTGACCT
CAGTCAACGCTCTTGTTCGAGTTTACACCAGAGGCCCGTGGGAAACCGCCCA
CGCCACCTTCTACGGTGGCAAGGATGCATCTGGGACCATGGGTGCGTTCCCATGC
ATTCCTTTTTATTTATTTTATTCTTATTATTATTTTTTCGGTTTATAAATTAATTGGG
ATGTGATTTTAGGTGGAGCATGTGGGTACGGTAACCTGTACAGCCAAGGGTATGG
CGTGAACACTGCGGCGCTAAGTACGGCGCTGTTCAACAATGGGCTGAGCTGCGGT

GCTTGTTTTCGAGCTCAAGTGTGTGGATGATCCTGAATGGTGTACCCCCGGCAGCC
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GATAATGGTGGGTGGTGCAACCCCCCTCGTGCCCATTTTCGACCTTCCATGCCTAT
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ATTTCTTTTCTAGCAAAGTTACAAATTATACATATTTTTTTTTTAACTAAATGTTTAG
CATATTACACTAATTCTATTAACTTTGTTTTATAGAGATTTTGATTAACTTCTGT
AAAGTTATTTATTAATAAATAATTTATCAATAGCAATAATATCACTTACCATGTATTA
CGGTCTGTAATATATTTTTTCTTACTTATAATGATTTGTAAAAAAGAAAAAAG
ATTTCTACATATTAACATTGTTACATGTTAGTCTTATTCTAATAATTTTTGTTAC
CTCATATTTAGGGTGCCATGTCGTAAACAAGGAGGGATAAGATTCACCATAAACG
GTTTTCGCTACTATAACTTGGTTTTGATCACCAATGTTGCGGGTGCGGGGGATATC
ACTCAGGCTTGGGTCAAGGTTTCCAAAACCGATTGGATGAGTCTTAAAAGAACT
GGGGCCAAAACCTGGCAATCAGATGAGGTGTTGATTGGACAATCACTTTCGTTCAA
GATTTTAGCTAGTGATGGTCGCACTTCCATCTCGGAGAACATAGTACCTTCTAATT
GGCAATTTGGTCAAACCTTTCCGGAAATAACTTTTGA