

IDENTIFICATION

Species: *Helianthus annuus*

Locus: HanXRQChr13g0414031

Gene Model: HanXRQChr13g0414031

Description: HanEXPA-28

Family: Alpha Expansin

3D structure:



GENOME DATABASES

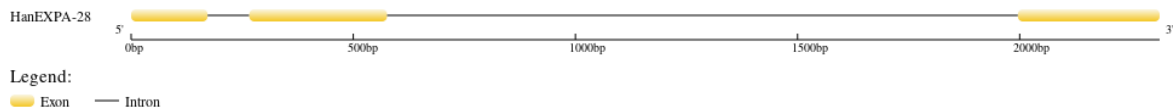
Phytozome: https://phytozome-next.jgi.doe.gov/info/Hannuus_r1_2

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

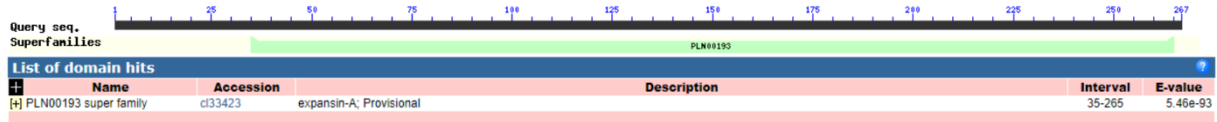
EXTERNAL RESOURCES

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

GENE STRUCTURE



DOMAIN ARCHITECTURE



SEQUENCES

Peptide

>HanEXPA-28

MASFYHSWSFCCFSSIVTLVFSWFVKPSGAVYHGYVPSPWTLAHATFYGDESASATM
GGACGYGNLITNGYGTDTAALSSTIFSDGYACGQCYQIKCVQSPWCYSGYTTVTATN
LCPNWSQDSNNGGWCNPPRTHFDMAKPAFMKIAKWKAGIVPVMYRRVPCNAIRK
GGIRFSFQNGYWLLVYVMNVAGAGDIHKMWVKGTKGWISMSHNWGASYQAFATL
LQGQALSFRLLSYTTKQTITAYNVAPANWNLGLTYQAHVNFH*

CDS (coding sequence)

>HanEXPA-28

ATGGCTTCCTTTTATCATTTCATGGAGCTTTTGCTGTTTTTCTAGCATTGTCACACTC
GTCTTCTCATGGTTCGTAAAGCCTAGTGGAGCTGTCTACCATGGCTACGTTCCGAG
CCCATGGACCCTAGCCCACGCCACATTTTATGGCGATGAGTCTGCATCCGCAACC
ATGGGGGGGTGCTTGTGGATATGGAACTTGATTACTAACGGATATGGAAGTATA
CGGCTGCATTGAGCTCAACGATCTTTAGCGATGGATACGCATGTGGTCAGTGTTA
CCAAATAAAGTGTGTCCAATCTCCATGGTGCTATAGTGGTTACACAACCGTAACG
GCCACCAACCTCTGCCCACCAAAGTGTCTCAGGATTCAAACAATGGTGGGTGGT
GCAACCCTCCCCGAACCCATTTTCGACATGGCTAAGCCCAGGTTTCATGAAAATTGC
TAAATGGAAAGCCGGCATTGTTCTGTCATGTATCGCAGGGTTCCATGCAATGCC
ATCAGGAAAGGTGGGATCAGGTTTTCTTTTCAAGGAAATGGGTACTGGTTGTTGG
TGTATGTGATGAATGTTGCTGGTGGTGGTACATCCATAAGATGTGGGTCAAAGG
GACCAAGACCGGTTGGATCAGCATGAGCCATAACTGGGGTGCTTCTTACCAAGCT
TTCGCGACTCTTCAAGGTCAAGCCCTCTCCTTCAGGCTAACTTCATACACCACAAA
ACAGACCATTACGGCTTACAATGTCGCCCCGGCTAATTGGAACCTAGGGTTGACA
TACCAAGCCCATGTCAACTTCCATTGA

Nucleotide

>HanEXPA-28

ATGGCTTCCTTTTATCATTTCATGGAGCTTTTGCTGTTTTTCTAGCATTGTCACACTC
GTCTTCTCATGGTTCGTAAAGCCTAGTGGAGCTGTCTACCATGGCTACGTTCCGAG
CCCATGGACCCTAGCCCACGCCACATTTTATGGCGATGAGTCTGCATCCGCAACC
ATGGGTATGCAATACATGCATGTTACATAGTCTAACTATCATCTAATAGTTTTAGT
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TATGGAACTTGATTACTAACGGATATGGAAGTACGGCTGCATTGAGCTCAA
CGATCTTTAGCGATGGATACGCATGTGGTCAGTGTACCAAATAAAGTGTGTCCA
ATCTCCATGGTGCTATAGTGGTTACACAACCGTAACGGCCACCAACCTCTGCCA
CCAACTGGTCTCAGGATTCAAACAATGGTGGGTGGTGCACCCTCCCCGAACCC
ATTTGACATGGCTAAGCCCGCGTTCATGAAAATTGCTAAATGGAAAGCCGGCAT
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TGTTACAGTGCCGAACCCAAGAACTTTTTCCAGTGGGTTCCTTTGGTTAGATTCT
CACTAATTTTTTTCAATACAACGTTACGATTTTACCCTAAAAATTCTCTTTTCTAAT
ATATATATATATATATAGGGTAGGGCTAGGTAGAAAACCCTAAAAATTTGAGAA
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TAATATACATGTTTTTAAGAGTTTTGAGCTAAAAAAAAAAAAATCAAAAAGCGC
CGAGTGGTTTTTAAAAAAAAAAAAATAACAAGTTTCAGCACTTTTTGTCTAACAC
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CATAACCACAAAACAGACCATTACGGCTTACAATGTGCCCCGGCTAATTGGAA
CCTAGGGTTGACATACCAAGCCCATGTCAACTTCCATTGA