

IDENTIFICATION

Species: *Helianthus annuus*

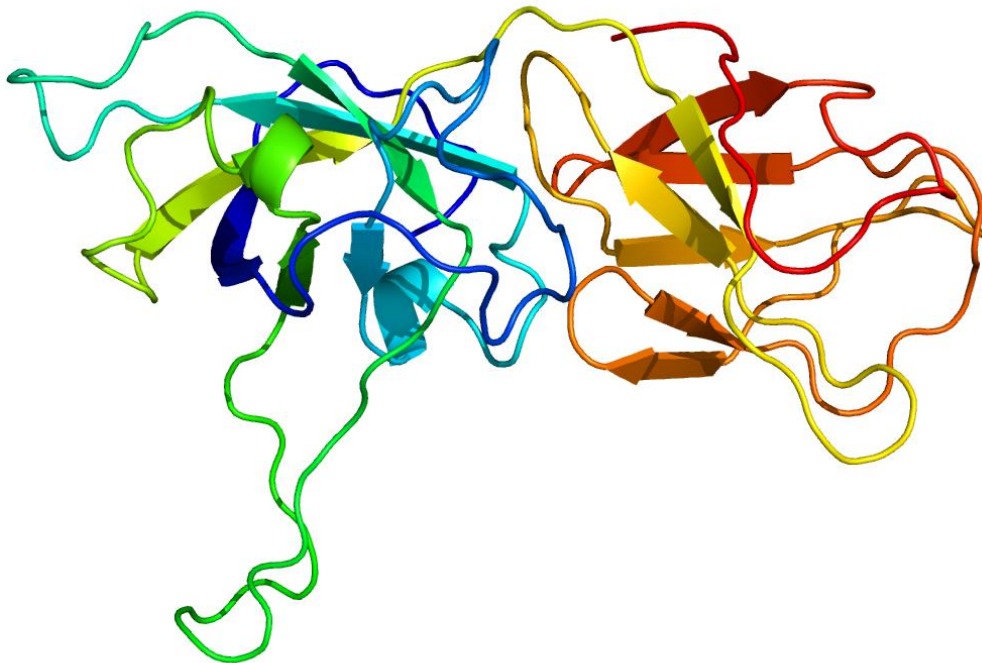
Locus: HanXRQChr12g0378631

Gene Model: HanXRQChr12g0378631

Description: HanEXPA-21

Family: Alpha Expansin

3D structure:



GENOME DATABASES

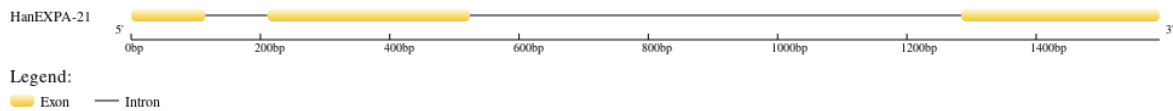
Phytozome: https://phytozome-next.jgi.doe.gov/info/Hannuus_r1_2

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

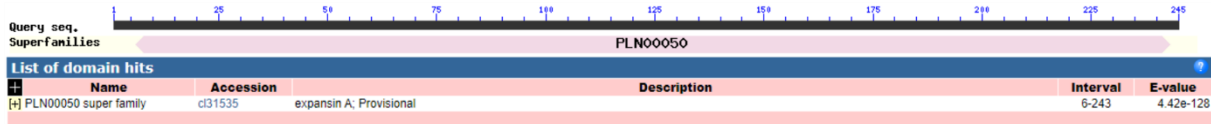
EXTERNAL RESOURCES

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

GENE STRUCTURE



DOMAIN ARCHITECTURE



SEQUENCES

Peptide

>HanEXPA-21

MKSIVIFIFSSLLLVSFPSIVNGGWLNHAHATFYDDGTMGGACGYGNVYRQGYGTNNV
ALSSALFNDGLSCGACFQIMCVNDRQWCLPGSIVVTATNFCPPNPALPSEKGGWCNP
PLRHFDSLQPAFLRIAQYKAGIVPVAYYRRVPCVRRGGIRFQMNGHPYFNLVLITNVGG
AGDVHAVAIGSRTGWQQMKQNWGQNWQSDTYLNGQSLSFKVTTS DGR TVVSNN
VVPANWSFGQTFSGSQFR*

CDS (coding sequence)

>HanEXPA-21

ATGAAATCCATTGTTATTTTCATTTTCTCTAGCTTATTGCTTGTTAGTTTTCCGTCA
ATCGTTAACGGCGGTTGGCTCAATGCGCATGCCACCTTCTACGACGACGGCACAA
TGGGTGGTGCTTGTGGGTATGGGAATGTGTATCGTCAAGGGTATGGTACAAACAA
TGTAGCATTAAAGTAGTGCTTTGTTCAACGATGGTTTGAGTTGTGGGGCATGTTTTT
AAATCATGTGTGTTAATGATCGTCAATGGTGTTTACCGGGTCCATTGTTGTCACC
GCCACCAACTTCTGCCCACCGAACCCCGCCTTACCTAGCGAGAAAGGCGGCTGGT
GCAACCCTCCTCTACGTCATTTTATCTATCTCAACCTGCCTTCTACGATTGCT
CAGTACAAAGCTGGAATTGTTCCCTGTTGCTTATAGAAGGGTACCCTGCGTGAGAA
GGGGTGAATTAGGTTCCAAATGAACGGACACCCTACTTCAATTTGGTGTTAAT
TACAAATGTGGGTGGTGCTGGTGACGTGCACGCGGTGGCAATCAAAGGGTCAAG
AACAGGATGGCAACAAATGAAACAAAACCTGGGGCCAAAACCTGGCAATCTGACAC
TTATTTGAACGGGCAGTCTCTATCTTTAAGGTCACCACAAGTGATGGTCGGACT
GTGGTGTCCAACAATGTTGTCCCGCTAATTGGTCTTTCGGGCAGACCTTCAGCG
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Nucleotide

>HanEXPA-21

ATGAAATCCATTGTTATTTTCATTTTCTCTAGCTTATTGCTTGTTAGTTTTCCGTCA
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TCATTTTGATCTATCTCAACCTGCCTTCTACGCATTGCTCAGTACAAAGCTGGAA
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TATATCTACTTAGAACTTTCGTTTATGCATCACTTGTTTCTTAATCATGCGATGA
TATTGGTATTTAGATTTTCATTTACATATTGTAGTTTACTTTTCATTTACAT
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