

## IDENTIFICATION

**Species:** *Manihot esculenta*

**Locus:** Manes.18G010200

**Gene Model:** Manes.18G010200.1

**Description:** MsEXPA-32

**Family:** Alpha Expansin

**3D structure:**



## GENOME DATABASES

Phytozome: [https://phytozome-next.jgi.doe.gov/info/Mesculenta\\_v7\\_1](https://phytozome-next.jgi.doe.gov/info/Mesculenta_v7_1)

KEGG: <https://www.genome.jp/entry/T05761>

## EXTERNAL RESOURCES

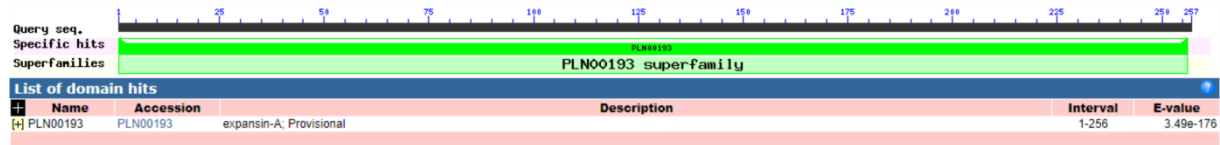
<https://cassavagenome.org/>

<https://cassavabase.org/>

## GENE STRUCTURE



## DOMAIN ARCHITECTURE



## SEQUENCES

### Peptide

>MsEXPA-32

MAKLVLAMLILLQLFCFSAINVNFAAASGWTKAHATFYGGSDASGTMGGACGYGN  
LYSTGYGTSTAALSTALFNDGASCGQCYRIMCDSQADPRWCIKGSVTITATNFCPPN  
FALPNNNGGWCNPPPLQHFDMAQPAWEKIGIYRGGIIPVMFQRVPCEKSGGVRFVNG  
RDYFELVLISNVAGGGSVKSVSIKGSKTGWMTMSRNWGANWQSNAYLNGQSLSFR  
VTTTDDGETRLFNDIVPAKWAFGQTFTTAVQF\*

### CDS (coding sequence)

>MsEXPA-32

ATGGCGAAGCTGGTCCTTGCAATGCTAATCTTGCTACAACCTTTCTGTTTTTCAGC  
TATAAATGTTAATGCCTTTGCGGCTTCTGGGTGGACAAAAGCTCATGCTACTTTTT  
ATGGAGGAAGTGATGCTTCAGGAAGTATGGGGGGAGCTTGTGGATATGGTAACC  
TGTATTCAACTGGCTATGGGACCAGCACTGCTGCTTTAAGTACTGCTTTATTCAAT  
GATGGAGCTTCATGTGGACAGTGCTACAGAATCATGTGTGATTCTCAAGCTGATC  
CCAGGTGGTGTATTAAAGGCACATCTGTGACCATTACTGCAACCAATTTCTGCC  
ACCAAATTTTGCCCTTCCAAACAACAATGGAGGCTGGTGAACCCTCCCCTCCAG  
CACTTCGACATGGCTCAGCCTGCTTGGGAAAAGATTGGCATCTACAGAGGTGGGA  
TCATCCCTGTTATGTTCCAAAGGGTTCATGCGAGAAAAGCGGTGGAGTTAGATT  
CACAGTTAACGGAAGAGACTATTTTCGAGCTTGTGTTGATAAGCAATGTGGCAGGA  
GGTGGTTCCGTCAAATCTGTATCAATTAAGGTTCAAAAACAGGGTGGATGACAA  
TGTCAAGAACTGGGGAGCTAATTGGCAATCCAATGCTTATCTCAATGGGCAATC  
TCTATCTTTCAGAGTCACAACACTACTGATGGGGAGACCAGATTATTCAACGACATC  
GTTCCAGCAAAATGGGCATTTGGCCAACTTTCACTACCGCAGTACAATTCTGA

### Nucleotide

>MsEXPA-32

TAAATACAGAGTCTCCTATCTCTAGATATTCACCCTCAATTGTCTTCCTATTTTCTC  
CCTATTCATCATTTTTTGCCCTGAGAAAATGGCGAAGCTGGTCCTTGCAATGCTAA  
TCTTGCTACAACCTTTCTGTTTTTTCAGCTATAAATGTTAATGCCTTTGCGGCTTCTG  
GGTGGACAAAAGCTCATGCTACTTTTTATGGAGGAAGTGATGCTTCAGGAAGTAT  
GGGTATGCAGCTATTCTACTTCTCTCTCATTGTTTATCTTCAGGAATAATATTT  
CACTTGTTTTCATATTATTTCTGGCTACAGGGGGAGCTTGTGGATATGGTAACCT  
GTATTCAACTGGCTATGGGACCAGCACTGCTGCTTTAAGTACTGCTTTATTCAATG

ATGGAGCTTCATGTGGACAGTGCTACAGAATCATGTGTGATTCTCAAGCTGATCC  
CAGGTGGTGTATTAAAGGCACATCTGTGACCATTACTGCAACCAATTTCTGCCCA  
CCAAATTTTGGCCCTTCCAAACAACAATGGAGGCTGGTGCAACCCTCCCCTCCAGC  
ACTTCGACATGGCTCAGCCTGCTTGGGAAAAGATTGGCATCTACAGAGGTGGGAT  
CATCCCTGTTATGTTCCAAAGGTACCAACTTTTTATTTTTTCTCCTGGGATAATT  
CCATGTATAGGTGAAGGCTTAGGCTTTTAAATTTTGGCAACCCAATTAGCTGGAT  
GAATCTAAGGCTCTGGGAATCATCGGTACAGGGTTCATGCGAGAAAAGCGGTG  
GAGTTAGATTCACAGTTAACGGAAGAGACTATTCGAGCTTGTGTTGATAAGCAA  
TGTGGCAGGAGGTGGTTCGGTCAAATCTGTATCAATTAAGGTTCAAAAACAGGG  
TGGATGACAATGTCAAGAACTGGGGAGCTAATTGGCAATCCAATGCTTATCTCA  
ATGGGCAATCTCTATCTTTCAGAGTCACA ACTACTGATGGGGAGACCAGATTATT  
CAACGACATCGTTCAGCAAAAATGGGCATTTGGCCAACTTTCACTACCGCAGTA  
CAATTCTGAAGTTAAATCATCATGGGTTTTGGAGTTGAGGGTTTGATTTGGCAGA  
GGCGTGCTTATGATTTATAGAGC