

Auxin-responsive protein IAA3 (IAA3), Recombinant Protein

Cat RP01006

Size 0.02 mg (E-Coli)/ 0.1 mg (E-Coli)/ 0.02 mg (Yeast)/ 0.1 mg (Yeast)/ 0.02 mg (Baculovirus)/ 0.02 mg (Mammalian-Cell)/ 1

mg (E-Coli)/ 0.1 mg (Baculovirus)/ 1 mg (Yeast)/ 0.1 mg (Mammalian-Cell)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-Cell)

Species

Arabidopsis thaliana (Mouse-ear cress)

Full Product Name

Recombinant Arabidopsis thaliana Auxin-responsive protein IAA3 (IAA3)

Product Gene Name

IAA3 recombinant protein

Product Synonym Gene Name

IAA3

Purity

Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)

Sequence

MDEFVNLIKET ELRLGLPGTD NVCEAKERVS CCNNNNKRVL STDTEKEIES SSRKTETSPP RKAQIVGWPP
VRSYRKNNIQ SKKNESEHEG QGIYVKVSMG GAPIYLRKIDL SCYKGYSELL KALEVMFKFS VGEYFERDGY
KGSDFVPTYE DKDGDWMLIG DVPWEMFICT CKRLRIMKGS EAKGLGCGV

Sequence Positions

1-189, Full length protein

Format

Lyophilized or liquid (Format to be determined during the manufacturing process)

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

21,520 Da

Storage

Store at -20°C. For long-term storage, store at -20°C or -80°C. Store working aliquots at 4°C for up to one week. Repeated freezing and thawing is not recommended.

Protein Family

Auxin-responsive protein

NCBI Accession

NP_171920.1

NCBI GI

15219692

NCBI GenBank Nucleotide

NM_100305.4

NCBI GeneID

839570

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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NCBI Official Full Name
AUX/IAA transcriptional regulator family protein

NCBI Official Symbol

SHY2

NCBI Official Synonym Symbols

F19P19.32; F19P19_32; IAA3; indole-3-acetic acid inducible 3; SHORT HYPOCOTYL 2

NCBI Protein Information

AUX/IAA transcriptional regulator family protein

NCBI Summary

SHY2/IAA3 regulates multiple auxin responses in roots. It is induced rapidly by IAA, and has been shown to be phosphorylated by oat phytochrome A in vitro.

UniProt Gene Name

IAA3

UniProt Synonym Gene Names

SHY2

UniProt Protein Name

Auxin-responsive protein IAA3

UniProt Synonym Protein Names

Indoleacetic acid-induced protein 3; Short hypocotyl; Suppressor of HY2

UniProt Primary Accession

Q38822

UniProt Secondary Accession

O04741

UniProt Related Accession

Q38822

UniProt Comments

Aux/IAA proteins are short-lived transcriptional factors that function as repressors of early auxin response genes at low auxin concentrations. Repression is thought to result from the interaction with auxin response factors (ARFs), proteins that bind to the auxin-responsive promoter element (AuxRE). Plays a central role in auxin regulation of root growth, in gravitropism, and in lateral root formation (PubMed:9895319). Regulated by an auxin-induced protein turnover (PubMed:14617065). Formation of heterodimers with ARF proteins may alter their ability to modulate early auxin response genes expression. When activated by cytokinin, restricts the expression of the PIN genes to the vascular transition zone (PubMed:19039136). Induction of SHY2 in the vascular transition zone restricts BRX expression to down-regulate PIN3 and thus limit meristem growth, but proper SHY2 expression requires BRX (PubMed:21149702). Involved in meristem growth and in determining its size (PubMed:20605455). May participate in strigolactone signaling to regulate meristem size and lateral root formation (PubMed:23425316).

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