

Tryptophan aminotransferase 1 (TAA1), Recombinant Protein

Cat RP01061

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

mg (Baculovirus)/ 1 mg (E-Coli)/ 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 Tryptophan aminotransferase 1 (TAA1)

Product Gene Name

TAA1 recombinant protein

Product Synonym Gene Name

TAA1

Purity

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

Sequence

MVKLENSRKP EKISNKNIPM SDFVVNLDHG DPTAYEEYWR KMGDRCTVTI RGCDLMSYFS DMTNLCWFLE
PELEDAIKDL HGVVGNAATE DRYIVVGTGS TQLCQAAVHA LSSLARSQPV SVVAAAPFYS TYVEETTYVR
SGMYKWEGDA WGFDKKGPI ELVTSPNNPD GTIRETVVNR PDDDEAKVIH DFAYYWPHYT PITRRQDHI
MLFTFSKITG HAGSRIGWAL VKDKEVAKKM VEYIIVNSIG VSKESQVRTA KILNVLKETC KSESESEENFF
KYGREMMKNR WEKLREVVKE SDAFTLPKYP EAFCNFYGKS LESYPAFAWL GTKEETDLVS ELRRHKVMSR
AGERCGSDKK HVRVSMLSRE DVFNVFLERL ANMKLIKSID L

Sequence Positions

1-391, 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

44,801 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

L-tryptophan--pyruvate aminotransferase

NCBI Accession

NP_177213.1

NCBI GI

15223183

NCBI GenBank Nucleotide

NM_105724.3

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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

NCBI GeneID

843393

NCBI Official Full Name

tryptophan aminotransferase of Arabidopsis 1

NCBI Official Symbol

TAA1

NCBI Official Synonym Symbols

CKRC1; cytokinin induced root curling 1; F24J13.13; F24J13_13; SAV3; SHADE AVOIDANCE 3; tryptophan aminotransferase of Arabidopsis 1; WEAK ETHYLENE INSENSITIVE 8; WEI8

NCBI Protein Information

tryptophan aminotransferase of Arabidopsis 1

NCBI Summary

TAA1 is involved in the shade-induced production of indole-3-pyruvate (IPA), a precursor to IAA, a biologically active auxin. It is also involved in regulating many aspects of plant growth and development from embryogenesis to flower formation and plays a role in ethylene-mediated signaling. This enzyme can catalyze the formation of IPA from L-tryptophan. Though L-Trp is expected to be the preferred substrate in vivo, TAA1 also acts as an aminotransferase using L-Phe, L-Tyr, L-Leu, L-Ala, L-Met, and L-Gln.

UniProt Gene Name

TAA1

UniProt Synonym Gene Names

CKRC1; SAV3; TIR2; WEI8

UniProt Protein Name

L-tryptophan--pyruvate aminotransferase 1

UniProt Synonym Protein Names

Protein CYTOKININ INDUCED ROOT CURLING 1; Protein SHADE AVOIDANCE 3; Protein TRANSPORT INHIBITOR RESPONSE 2; Protein TRYPTOPHAN AMINOTRANSFERASE OF ARABIDOPSIS 1; Protein WEAK ETHYLENE INSENSITIVE 8; Tryptophan transaminase

UniProt Primary Accession

Q9S7N2

UniProt Comments

L-tryptophan aminotransferase involved in auxin (IAA) biosynthesis. Can convert L-tryptophan and pyruvate to indole-3-pyruvic acid (IPA) and alanine. Catalyzes the first step in IPA branch of the auxin biosynthetic pathway. Required for auxin production to initiate multiple change in growth in response to environmental and developmental cues. It is also active with phenylalanine, tyrosine, leucine, alanine, methionine and glutamine. Both TAA1 and TAR2 are required for maintaining proper auxin levels in roots, while TAA1, TAR1 and TAR2 are required for proper embryo patterning. Involved in the maintenance of the root stem cell niches and required for shade avoidance.

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY