

Probable indole-3-acetic acid-amido synthetase GH3.5 (GH3.5), Recombinant Protein

Cat RP12716

Species

Oryza sativa subsp. japonica (Rice)

Full Product Name

Recombinant Oryza sativa subsp. japonica Probable indole-3-acetic acid-amido synthetase GH3.5 (GH3.5), partial

Product Gene Name

GH3.5 recombinant protein

Product Synonym Gene Name

GH3.5

Purity

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

Format

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

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

65,095 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

Jasmonic acid-amido synthetase

NCBI Accession

XP_015639715.1

NCBI GI

1002270789

NCBI GenBank Nucleotide

XM_015784229.1

NCBI GeneID

4339756

NCBI Official Full Name

jasmonic acid-amido synthetase JAR1

NCBI Official Symbol

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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LOC4339756

NCBI Official Synonym Symbols

JAR1; GH3.5; OsJAR1; OsGH3-5; OsJ_19714

NCBI Protein Information

jasmonic acid-amido synthetase JAR1

UniProt Gene Name

GH3.5

UniProt Synonym Gene Names

OsJAR1

UniProt Protein Name

Jasmonic acid-amido synthetase JAR1

UniProt Synonym Protein Names

Auxin-responsive GH3-like protein 5

UniProt Primary Accession

Q6I581

UniProt Secondary Accession

Q0DFJ9; A0A0P0WRM7

UniProt Related Accession

Q6I581

UniProt Comments

Catalyzes the synthesis of jasmonate-amino acid conjugates by adenylation. Catalyzes the conjugation of jasmonate (JA) to Ile when expressed in a heterologous system (E.Coli) (PubMed:21619871). Catalyzes in vitro the conjugation of jasmonate (JA) to Ile, Phe, Cys, Leu, Met, Ala, Val and Trp (PubMed:24033451). Involved in the production of JA-Ile in response to infection by the rice blast fungus *Magnaporthe oryzae* (PubMed:21619871, PubMed:23832371). Required for the accumulation of the flavonoid phytoalexin sakuranetin in response to infection by the rice blast fungus (PubMed:23832371). Involved in herbivory-induced JA-Ile accumulation (PubMed:23621526). Involved in the production of JA-Ile in response to wounding (PubMed:21619871, PubMed:23621526, PubMed:24033451). Required for modulation of light and JA signaling in photomorphogenesis (PubMed:18266905). Required for normal seed development (PubMed:18266905, PubMed:23621526). Required for optimal flower opening and closing and anther dehiscence (PubMed:24947835). May catalyze the synthesis of indole-3-acetic acid (IAA)-amino acid conjugates, providing a mechanism for the plant to cope with the presence of excess auxin .

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