Mitogen-activated protein kinase kinase kinase 1 (MEKK1), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP05389*

Species
Arabidopsis thaliana (Mouse-ear cress)

Full Product Name
Recombinant Arabidopsis thaliana Mitogen-activated protein kinase kinase kinase 1 (MEKK1) , partial

Product Gene Name
MEKK1 recombinant protein

Product Synonym Gene Name
MEKK1

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
66,024 Da

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

Protein Family
Mitogen-activated protein kinase kinase kinase

NCBI Accession
NP_192590.1

NCBI GI
15236515

NCBI GenBank Nucleotide
NM_116919.4

NCBI GeneID
826409

NCBI Official Full Name
MAPK/ERK kinase kinase 1

NCBI Official Symbol
MEKK1

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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NCBI Official Synonym Symbols
ARAKIN; ATMEKK1; MAPK/ERK kinase kinase 1; MAPKKK8; T15F16.5; T15F16_5

NCBI Protein Information
MAPK/ERK kinase kinase 1

NCBI Summary
Encodes a member of the A1 subgroup of the MEKK (MAPK/ERK kinase kinase) family. MEKK is another name for Mitogen-Activated Protein Kinase Kinase Kinase (MAPKKK or MAP3K). This subgroup has four members: At4g08500 (MEKK1, also known as ARAKIN, MAP3Kb1, MAPKKK8), At4g08480 (MEKK2, also known as MAP3Kb4, MAPKKK9), At4g08470 (MEKK3, also known as MAP3Kb3, MAPKKK10) and At4g12020 (MEKK4, also known as MAP3Kb5, MAPKKK11, WRKY19). Nomenclatures for mitogen-activated protein kinases are described in Trends in Plant Science 2002, 7(7):301. Mediates cold, salt, cadmium and wounding stress signalling. Phosphorylates MEK1.

UniProt Gene Name
MEKK1

UniProt Synonym Gene Names
ARAKIN; AtMEKK1; MAP kinase kinase kinase 1

UniProt Protein Name
Mitogen-activated protein kinase kinase kinase 1

UniProt Primary Accession
Q39008

UniProt Secondary Accession
O81470; Q39020; Q8W4N5

UniProt Related Accession
Q39008

UniProt Comments
The MEKK1, MKK1/MKK2 and MPK4 function in a signaling pathway that modulates the expression of genes responding to biotic and abiotic stresses and also plays an important role in pathogen defense by negatively regulating innate immunity. Involved in the innate immune MAP kinase signaling cascade (MEKK1, MKK4/MKK5 and MPK3/MPK6) downstream of bacterial flagellin receptor FLS2. May be involved in the cold and salinity stress-mediated MAP kinase signaling cascade (MEKK1, MKK1/MKK2 and MPK4/MPK6). Activates by phosphorylation the downstream MKK2, MKK4 and MKK5 in a calcium-dependent manner.

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