Serine/threonine-protein kinase BIK1 (BIK1), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP01046*

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 Serine/threonine-protein kinase BIK1 (BIK1)

Product Gene Name
BIK1 recombinant protein

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

Sequence
GSCFSSRVKA DIFHNGKSSD LYGLSLSSRK SSSTVAAAQK TEGEILSSTP VKSFTFNELK LATRNFRPDS VIGEGGFGCV FKGWLDESTL TPTKPGTGLV IAVKKLNQEG FQGHREWLTE INYLGQLSHP NLVKLIGYCL EDEHRLLVYE FMQKGSLENH LFRRGAYFKP LPWFLRVNVA LDAAKGLAFL HSDPVKVIYR DIKASNILLD ADYNAKLSDF GLARDGPMGD LSYVSTRVMG TYGYAAPEYM SSGHLNARSD VYSFGVLLLE ILSGKRALDH NRPAKEENLV DWARPYLTSK RKVLLIVDNR LDTQYLPEEA VRMASVAVQC LSFEPKSRPT MDQVVRALQQ LQDNLGKPSQ TNPVKDTKKL GFKTGTTKSS EKRFTQKPFG RHLV

Sequence Positions
2-395, 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
44,097 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
Serine/threonine-protein kinase

NCBI Accession
NP_181496.1

NCBI GI
15225520

NCBI GenBank Nucleotide
NM_129522.5

NCBI GeneID
818549

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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NCBI Official Full Name
botrytis-induced kinase1

NCBI Official Symbol
BIK1

NCBI Official Synonym Symbols
botrytis-induced kinase1; F12L6.32; F12L6_32

NCBI Protein Information
botrytis-induced kinase1

NCBI Summary
Encodes a plasma membrane-localized ser/thr protein kinase that is a crucial component of host response signaling required to activate the resistance responses to Botrytis and A. brassicicola infection. It is likely a negative regulator of salicylic acid accumulation and basal defense against virulent bacterial pathogens.

UniProt Gene Name
BIK1

UniProt Protein Name
Serine/threonine-protein kinase BIK1

UniProt Synonym Protein Names
Protein BOTRYTIS-INDUCED KINASE 1

UniProt Primary Accession
O48814

UniProt Related Accession
O48814

UniProt Comments
Plays a central role in immune responses (PubMed:20413097). Required to activate the resistance responses to necrotrophic pathogens (PubMed:16339855). Phosphorylates FLS2 and BAK1 (PubMed:20404519, PubMed:24104392). Involved in pathogen-associated molecular pattern (PAMP)-triggered immunity (PTI) signaling and defense responses downstream of FLS2. Acts additively with PBL1 in PTI defenses (PubMed:20413097). Acts as positive regulator of the PAMP flg22-induced increase of cytosolic calcium. Binds directly and phosphorylates the NADPH oxidase RBOHD at specific sites in a calcium-independent manner to enhance reactive oxygen species (ROS) generation upon flg22 perception. ROS production in response to flg22 controls stomatal movement and restriction of bacterial entry into leaf tissues (PubMed:24629339). Seems not required for flg22-induced MAPK activation (Probable). Required for Pep1-induced defenses. Pep1 is an endogenous elicitor that potentiates PAMP-inducible plant responses. In association with PEPR1, acts downstream of the canonical ethylene signaling cascade to regulate ethylene responses (PubMed:23431184). Involved in ethylene signaling. Destabilizes EIN3, the key transcription activator in ethylene signaling, and represses EIN3-dependent transcription (PubMed:26021844). Acts as a negative regulator in brassinosteroid (BR) signaling. Functions in BR signaling by direct interaction with the BR receptor BRI1 cytosolic kinase domain (PubMed:23818580).

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