Recombinant Human MKK4/MAP2K4 Kinase

Catalog No.: RP03573LQ

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Sequence Information

Species
Human

Gene ID
6416

Swiss Prot
P45985

Tags
N-His-Strep II-GST

Synonyms
Dual specificity mitogen-activated protein kinase kinase 4,MAP kinase kinase 4; MAPKK 4

Product Information

Source
Insect cell

Purification
≥ 90% as determined by reducing SDS-PAGE.

Calculated MW
72.9 KDa

Observed MW
60-85 kDa

Endotoxin

Formulation
Supplied as 0.22μm filtered solution in 50 mM HEPES (pH7.5), 200 mM NaCl, 20% glycerol, 1 mM DTT,
0.1 M Trehalose.

Reconstitution
Please use rapid thawing with running water to thaw the protein samples.
For complete recovery, mix well and spin before use.
Product must not be stored in diluted solutions.
Aliquots below 10 μl are not advisable.
Avoid repetitive freeze-thaw cycles!

Background

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K7/MKK7, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8 /JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7 /MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The phosphorylation of the Thr residue by MAP2K7 /MKK7 seems to be the prerequisite for JNK activation at least in response to pro-inflammatory cytokines, while other stimuli activate both MAP2K4/MKK4 and MAP2K7/MKK7 which synergistically phosphorylate JNKs. MAP2K4 is required for maintaining peripheral lymphoid homeostasis. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Whereas MAP2K7 /MKK7 exclusively activates JNKs, MAP2K4/MKK4 additionally activates the p38 MAPKs MAPK11, MAPK12, MAPK13 and MAPK14.

Basic Information

Description
Recombinant Human MKK4/MAP2K4 Kinase is produced by Insect cell expression system. The target protein is expressed with sequence (Ala2-Asp399) of Human MKK4/MAP2K4 fused with a His tag at the N-terminus.

Activity

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -70℃

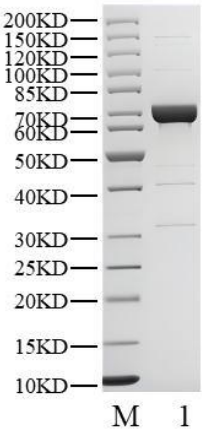
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

400-999-6126
cn.market@abclonal.com.cn
www.abclonal.com.cn

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Validation Data



Recombinant Human MKK4/MAP2K4 Kinase was determined by SDS-PAGE under reducing conditions with Coomassie Blue.