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MEKK4 (MAP2K4) Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP7916a

Specification

MEKK4 (MAP2K4) Antibody (C-term) Blocking peptide - Product Information

Primary Accession P45985

MEKK4 (MAP2K4) Antibody (C-term) Blocking peptide - Additional Information

Gene ID 6416

Other Names
Dual specificity mitogen-activated protein kinase kinase 4, MAP kinase kinase 4, MAPKK 4, JNK-activating kinase 1, MAPK/ERK kinase 4, MEK 4, SAPK/ERK kinase 1, SEK1, Stress-activated protein kinase kinase 1, SAPK kinase 1, SAPKK-1, SAPKK1, c-Jun N-terminal kinase kinase 1, JNKK, MAP2K4, JNKK1, MEK4, MKK4, PRKMK4, SEK1, SERK1, SKK1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7916a was selected from the C-term region of human MKK4 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MEKK4 (MAP2K4) Antibody (C-term) Blocking peptide - Protein Information

Name MAP2K4

Synonyms JNKK1, MEK4, MKK4, PRKMK4, SEK1, SERK1,

Function
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.

Cellular Location
Cytoplasm. Nucleus.

Tissue Location
Abundant expression is seen in the skeletal muscle. It is also widely expressed in other tissues

MEKK4 (MAP2K4) Antibody (C-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

MEKK4 (MAP2K4) Antibody (C-term) Blocking peptide - Images

MEKK4 (MAP2K4) Antibody (C-term) Blocking peptide - Background

MKK4 is a dual specificity protein kinase that belongs to the Ser/Thr protein kinase family. This kinase is a direct activator of MAP kinases in response to various environmental stresses or mitogenic stimuli. It has been shown to activate MAPK8/JNK1, MAPK9/JNK2, and MAPK14/p38, but not MAPK1/ERK2 or MAPK3/ERK3. This kinase is phosphorylated, and thus activated by MAP3K1/MEKK. The knockout studies in mice suggested the roles of this kinase in mediating survival signal in T cell development, as well as in the organogenesis of liver.

MEKK4 (MAP2K4) Antibody (C-term) Blocking peptide - References

Sundarrajan, M., et al., Arthritis Rheum. 48(9):2450-2460 (2003).Ho, D.T., et al., J. Biol. Chem. 278(35):32662-32672 (2003).Javelaud, D., et al., J. Biol. Chem. 278(27):24624-24628 (2003).Witowsky, J.A., et al., J. Biol. Chem. 278(3):1403-1406 (2003).Lee, H.Y., et al., J. Biol. Chem. 278(26):23630-23638 (2003).