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Phospho-MAP3K5(S966) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3450a

Specification

Phospho-MAP3K5(S966) Antibody Blocking peptide - Product Information

Primary Accession Q99683

Phospho-MAP3K5(S966) Antibody Blocking peptide - Additional Information

Gene ID 4217

Other Names
Mitogen-activated protein kinase kinase kinase 5, Apoptosis signal-regulating kinase 1, ASK-1, MAPK/ERK kinase kinase 5, MEK kinase 5, MEKK 5, MAP3K5, ASK1, MAPKKK5, MEKK5

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3450a was selected from the region of human Phospho-MAP3K5-S966. 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.

Phospho-MAP3K5(S966) Antibody Blocking peptide - Protein Information

Name MAP3K5

Synonyms ASK1, MAPKKK5, MEKK5

Function
Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. Plays an important role in the cascades of cellular responses evoked by changes in the environment. Mediates signaling for determination of cell fate such as differentiation and survival. Plays a crucial role in the apoptosis signal transduction pathway through mitochondria-dependent caspase activation. MAP3K5/ASK1 is required for the innate immune response, which is essential for host defense against a wide range of pathogens. Mediates signal transduction of various stressors like oxidative stress as well as by receptor-mediated inflammatory signals, such as the tumor necrosis factor (TNF) or lipopolysaccharide (LPS). Once activated, acts as an upstream activator of the MKK/JNK signal transduction cascade and the p38

MAPK signal transduction cascade through the phosphorylation and activation of several MAP kinase kinases like MAP2K4/SEK1, MAP2K3/MKK3, MAP2K6/MKK6 and MAP2K7/MKK7. These MAP2Ks in turn activate p38 MAPKs and c-jun N-terminal kinases (JNKs). Both p38 MAPK and JNKs control the transcription factors activator protein-1 (AP-1).

Cellular Location
Cytoplasm. Endoplasmic reticulum. Note=Interaction with 14-3-3 proteins alters the distribution of MAP3K5/ASK1 and restricts it to the perinuclear endoplasmic reticulum region

Tissue Location
Abundantly expressed in heart and pancreas.

Phospho-MAP3K5(S966) Antibody Blocking peptide - Protocols

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

- Blocking Peptides

Phospho-MAP3K5(S966) Antibody Blocking peptide - Images

Phospho-MAP3K5(S966) Antibody Blocking peptide - Background

Mitogen-activated protein kinase (MAPK) signaling cascades include MAPK or extracellular signal-regulated kinase (ERK), MAPK kinase (MKK or MEK), and MAPK kinase kinase (MAPKKK or MEKK). MAPKK kinase/MEKK phosphorylates and activates its downstream protein kinase, MAPK kinase/MEK, which in turn activates MAPK. The kinases of these signaling cascades are highly conserved, and homologs exist in yeast, Drosophila, and mammalian cells. MAPKKK5 contains 1,374 amino acids with all 11 kinase subdomains. Northern blot analysis shows that MAPKKK5 transcript is abundantly expressed in human heart and pancreas. The MAPKKK5 protein phosphorylates and activates MKK4 (aliases SERK1, MAPKK4) in vitro, and activates c-Jun N-terminal kinase (JNK)/stress-activated protein kinase (SAPK) during transient expression in COS and 293 cells; MAPKKK5 does not activate MAPK/ERK.

Phospho-MAP3K5(S966) Antibody Blocking peptide - References

Dasgupta, P., et al., J. Biol. Chem. 279(37):38762-38769 (2004).Huang, S., et al., J. Biol. Chem. 279(35):36490-36496 (2004).Yasinska, I.M., et al., Arch. Biochem. Biophys. 428(2):198-203 (2004).Goldman, E.H., et al., J. Biol. Chem. 279(11):10442-10449 (2004).Park, H.S., et al., J. Biol. Chem. 279(9):7584-7590 (2004).