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MAPK7 Antibody (T218/Y220) Blocking peptide

Synthetic peptide
Catalog # BP7504b

Specification

MAPK7 Antibody (T218/Y220) Blocking peptide - Product Information

Primary Accession Q13164

MAPK7 Antibody (T218/Y220) Blocking peptide - Additional Information

Gene ID 5598

Other Names
Mitogen-activated protein kinase 7, MAP kinase 7, MAPK 7, Big MAP kinase 1, BMK-1, Extracellular signal-regulated kinase 5, ERK-5, MAPK7, BMK1, ERK5, PRKM7

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7504b was selected from the T218/Y220 region of human ERK5. 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.

MAPK7 Antibody (T218/Y220) Blocking peptide - Protein Information

Name MAPK7

Synonyms BMK1, ERK5, PRKM7

Function
Plays a role in various cellular processes such as proliferation, differentiation and cell survival. The upstream activator of MAPK7 is the MAPK kinase MAP2K5. Upon activation, it translocates to the nucleus and phosphorylates various downstream targets including MEF2C. EGF activates MAPK7 through a Ras-independent and MAP2K5-dependent pathway. May have a role in muscle cell differentiation. May be important for endothelial function and maintenance of blood vessel integrity. MAP2K5 and MAPK7 interact specifically with one another and not with MEK1/ERK1 or MEK2/ERK2 pathways. Phosphorylates SGK1 at Ser-78 and this is required for growth factor-induced cell cycle progression. Involved in the regulation of p53/TP53 by disrupting the PML-MDM2 interaction.

Cellular Location
Cytoplasm. Nucleus. Nucleus, PML body. Note=Translocates to the nucleus upon activation

Tissue Location
Expressed in many adult tissues. Abundant in heart, placenta, lung, kidney and skeletal muscle. Not detectable in liver

MAPK7 Antibody (T218/Y220) Blocking peptide - Protocols

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

- Blocking Peptides

MAPK7 Antibody (T218/Y220) Blocking peptide - Images

MAPK7 Antibody (T218/Y220) Blocking peptide - Background

MEK5 and ERK5, a member of the MAP kinase subfamily of the Ser/Thr protein kinases, interact specifically with one another and not with MEK1/ERK1 or MEK2/ERK2 pathways. ERK5 is activated by tyrosine and threonine phosphorylation It is expressed in many adult tissues, abundantly in heart, placenta, lung, kidney and skeletal muscle, but is not detectable in liver. The second proline-rich region may interact with actin targeting the kinase to a specific location in the cell. ERK5 is autophosphorylated on threonine and tyrosine residues when the C-terminal part of the kinase, which could have a regulatory role, is absent.

MAPK7 Antibody (T218/Y220) Blocking peptide - References

Zhou, G., et al., J. Biol. Chem. 270(21):12665-12669 (1995).Lee, J.D., et al., Biochem. Biophys. Res. Commun. 213(2):715-724 (1995).