

MLKLAK Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP8068c**Specification**

MLKLAK Antibody (Center) Blocking Peptide - Product Information

Primary Accession [O9NYL2](#)
Other Accession [NP_598407](#)

MLKLAK Antibody (Center) Blocking Peptide - Additional Information

Gene ID 51776

Other Names

Mitogen-activated protein kinase kinase kinase MLT, Human cervical cancer suppressor gene 4 protein, HCCS-4, Leucine zipper- and sterile alpha motif-containing kinase, MLK-like mitogen-activated protein triple kinase, Mixed lineage kinase-related kinase, MLK-related kinase, MRK, Sterile alpha motif- and leucine zipper-containing kinase AZK, ZAK, MLTK

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8068c](/product/products/AP8068c) was selected from the Center region of human MLKLAK. 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.

MLKLAK Antibody (Center) Blocking Peptide - Protein Information

Name MAP3K20 ([HGNC:17797](#))

Function

Stress-activated component of a protein kinase signal transduction cascade that promotes programmed cell death in response to various stress, such as ribosomal stress, osmotic shock and ionizing radiation (PubMed: [10924358](http://www.uniprot.org/citations/10924358), PubMed: [11836244](http://www.uniprot.org/citations/11836244), PubMed: [12220515](http://www.uniprot.org/citations/12220515), PubMed: [14521931](http://www.uniprot.org/citations/14521931), PubMed: [15350844](http://www.uniprot.org/citations/15350844), PubMed: [15737997](http://www.uniprot.org/citations/15737997))

target="_blank">15737997, PubMed:18331592, PubMed:20559024, PubMed:32610081, PubMed:32289254, PubMed:35857590, PubMed:26999302). Acts by catalyzing phosphorylation of MAP kinase kinases, leading to activation of the JNK (MAPK8/JNK1, MAPK9/JNK2 and/or MAPK10/JNK3) and MAP kinase p38 (MAPK11, MAPK12, MAPK13 and/or MAPK14) pathways (PubMed:11042189, PubMed:11836244, PubMed:12220515, PubMed:14521931, PubMed:15172994, PubMed:15737997, PubMed:32610081, PubMed:32289254, PubMed:35857590). Activates JNK through phosphorylation of MAP2K4/MKK4 and MAP2K7/MKK7, and MAP kinase p38 gamma (MAPK12) via phosphorylation of MAP2K3/MKK3 and MAP2K6/MKK6 (PubMed:11836244, PubMed:12220515). Involved in stress associated with adrenergic stimulation: contributes to cardiac decompensation during periods of acute cardiac stress (PubMed:15350844, PubMed:21224381, PubMed:27859413). May be involved in regulation of S and G2 cell cycle checkpoint by mediating phosphorylation of CHEK2 (PubMed:15342622).

Cellular Location

Cytoplasm. Nucleus. Note=Translocates to the nucleus upon ultraviolet B irradiation.

Tissue Location

Ubiquitously expressed. Isoform ZAKbeta is the predominant form in all tissues examined, except for liver, in which isoform ZAKalpha is more highly expressed

MLKLAK Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

MLKLAK Antibody (Center) Blocking Peptide - Images

MLKLAK Antibody (Center) Blocking Peptide - Background

MLKLAK is a member of the MAPKKK family of signal transduction molecules. It possesses an N-terminal kinase catalytic domain, followed by a leucine zipper motif and a sterile-alpha motif (SAM). This magnesium-binding protein forms homodimers and is located in the cytoplasm. The protein mediates gamma radiation signaling leading to cell cycle arrest and activity of this protein plays a role in cell cycle checkpoint regulation in cells. The protein also has pro-apoptotic activity.

MLKLAK Antibody (Center) Blocking Peptide - References

Blume-Jensen P, et al. Nature 2001. 411: 355. Cantrell D, J. Cell Sci. 2001. 114: 1439. Jhiang S

Oncogene 2000. 19: 5590. Manning G, et al. Science 2002. 298: 1912. Moller, D, et al. Am. J. Physiol. 1994. 266: C351-C359. Robertson, S. et al. Trends Genet. 2000. 16: 368. Robinson D, et al. Oncogene 2000. 19: 5548. Van der Ven, P, et al. Hum. Molec. Genet. 1993. 2: 1889. Vanhaesebroeck, B, et al. Biochem. J. 2000. 346: 561. Van Weering D, et al. Recent Results Cancer Res. 1998. 154: 271.