

MLKL Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7153a**Specification**

MLKL Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q8NB16](#)**MLKL Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 197259**Other Names**

Mixed lineage kinase domain-like protein, hMLKL, MLKL {ECO:0000312|EMBL:AAH281411}

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP7153a](/product/products/AP7153a) was selected from the N-term region of human MLKL. 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.

MLKL Antibody (N-term) Blocking Peptide - Protein Information**Name** MLKL {ECO:0000303|PubMed:22265413, ECO:0000312|HGNC:HGNC:26617}**Function**

Pseudokinase that plays a key role in TNF-induced necroptosis, a programmed cell death process (PubMed: [22265413](http://www.uniprot.org/citations/22265413), PubMed: [22265414](http://www.uniprot.org/citations/22265414), PubMed: [22421439](http://www.uniprot.org/citations/22421439), PubMed: [24316671](http://www.uniprot.org/citations/24316671)). Does not have protein kinase activity (PubMed: [22265413](http://www.uniprot.org/citations/22265413), PubMed: [22265414](http://www.uniprot.org/citations/22265414), PubMed: [22421439](http://www.uniprot.org/citations/22421439), PubMed: [24316671](http://www.uniprot.org/citations/24316671)). Activated following phosphorylation by RIPK3, leading to homotrimerization, localization to the plasma membrane and execution of programmed necrosis characterized by calcium influx and plasma

membrane damage (PubMed:22265413, PubMed:22265414, PubMed:22421439, PubMed:24316671). In addition to TNF-induced necroptosis, necroptosis can also take place in the nucleus in response to orthomyxoviruses infection: following activation by ZBP1, MLKL is phosphorylated by RIPK3 in the nucleus, triggering disruption of the nuclear envelope and leakage of cellular DNA into the cytosol. following ZBP1 activation, which senses double-stranded Z-RNA structures, nuclear RIPK3 catalyzes phosphorylation and activation of MLKL, promoting disruption of the nuclear envelope and leakage of cellular DNA into the cytosol (By similarity). Binds to highly phosphorylated inositol phosphates such as inositolhexakisphosphate (InsP6) which is essential for its necroptotic function (PubMed:29883610).

Cellular Location

Cytoplasm. Cell membrane Nucleus {ECO:0000250|UniProtKB:Q9D2Y4}. Note=Localizes to the cytoplasm and translocates to the plasma membrane on necroptosis induction (PubMed:24316671). Localizes to the nucleus in response to orthomyxoviruses infection (By similarity) {ECO:0000250|UniProtKB:Q9D2Y4, ECO:0000269|PubMed:24316671}

MLKL Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

MLKL Antibody (N-term) Blocking Peptide - Images

MLKL Antibody (N-term) Blocking Peptide - Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the γ phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The STE group (homologs of yeast Sterile 7, 11, 20 kinases) consists of 50 kinases related to the mitogen-activated protein kinase (MAPK) cascade families (Ste7/MAP2K, Ste11/MAP3K, and Ste20/MAP4K). MAP kinase cascades, consisting of a MAPK and one or more upstream regulatory kinases (MAPKKs) have been best characterized in the yeast pheromone response pathway. Pheromones bind to Ste cell surface receptors and activate yeast MAPK pathway.

MLKL Antibody (N-term) Blocking Peptide - References

Ota, T., et al., Nat. Genet. 36(1):40-45 (2004).