

KD-Validated Anti-MLKL Rabbit Monoclonal Antibody

Rabbit monoclonal antibody Catalog # AGI1839

Specification

KD-Validated Anti-MLKL Rabbit Monoclonal Antibody - Product Information

Application WB, FC, ICC Primary Accession Q8NB16

Reactivity
Clonality
Isotype

Human, Mouse
Monoclonal
Rabbit IgG

Calculated MW Predicted, 54 kDa, observed, 54 kDa KDa

Gene Name MLK

Aliases MLKL; Mixed Lineage Kinase Domain-Like

Protein; FLJ34389; HMLKL; Mixed Lineage

Kinase Domain-Like

Immunogen Recombinant protein of human MLKL

KD-Validated Anti-MLKL Rabbit Monoclonal Antibody - Additional Information

Gene ID 197259

Other Names

Mixed lineage kinase domain-like protein, hMLKL, MLKL {ECO:0000303|PubMed:22265413, ECO:0000312|HGNC:HGNC:26617}

KD-Validated Anti-MLKL Rabbit Monoclonal Antibody - 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, PubMed:22265414, PubMed:22421439, PubMed: 24316671). Does not have protein kinase activity (PubMed:22265413, PubMed:22265414, PubMed:22421439, PubMed: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

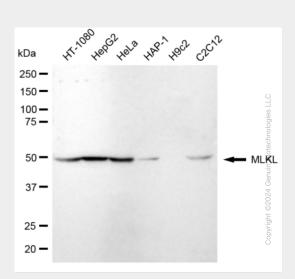
Cytoplasm. Cell membrane Nucleus {ECO:0000250|UniProtKB:Q9D2Y4}. Note=Localizes to the cytoplasm and translocates to the plasma membrane on necroptosis induction (PubMed:24316671). Localizes to the nucleus in response to orthomyxoviruses infection (By similarity) {ECO:0000250|UniProtKB:Q9D2Y4, ECO:0000269|PubMed:24316671}

KD-Validated Anti-MLKL Rabbit Monoclonal Antibody - Protocols

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

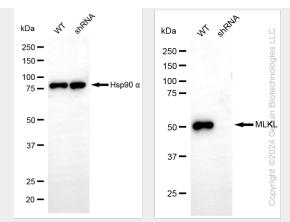
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

KD-Validated Anti-MLKL Rabbit Monoclonal Antibody - Images

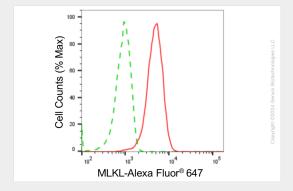


Western blotting analysis using anti-MLKL antibody (Cat#AGI1839). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-MLKL antibody (Cat#AGI1839, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

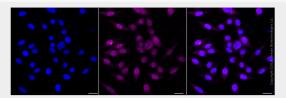




Western blotting analysis using anti-MLKL antibody (Cat#AGI1839). MLKL expression in wild type (WT) and MLKL shRNA knockdown (KD) HeLa cells with 20 μ g of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-MLKL antibody (Cat#AGI1839, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of MLKL expression in HepG2 cells using anti-MLKL antibody (Cat#AGI1839, 1:2,000). Green, isotype control; red,MLKL.



Immunocytochemical staining of HepG2 cells with anti-MLKL antibody(Cat#AGI1839, 1:1,000). Nuclei were stained blue with DAPI; MLKL was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Low. Scale bar, $20~\mu m$.