

MLKL (3B2): sc-293201

BACKGROUND

MLKL (mixed lineage kinase domain-like) is a 471 amino acid protein that contains one protein kinase domain which is thought to be catalytically inactive. The gene encoding MLKL maps to chromosome 16 and is expressed as two isoforms which are produced by alternative splicing events. Chromosome 16, which is associated with a variety of genetic disorders, encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

CHROMOSOMAL LOCATION

Genetic locus: MLKL (human) mapping to 16q23.1.

SOURCE

MLKL (3B2) is a mouse monoclonal antibody raised against amino acids 371-471 of MLKL of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MLKL (3B2) is recommended for detection of MLKL of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MLKL siRNA (h): sc-93430, MLKL shRNA Plasmid (h): sc-93430-SH and MLKL shRNA (h) Lentiviral Particles: sc-93430-V.

Molecular Weight of MLKL: 54 kDa.

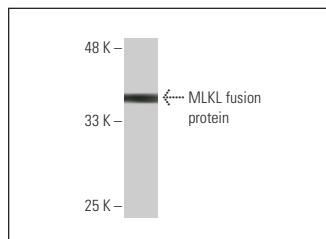
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

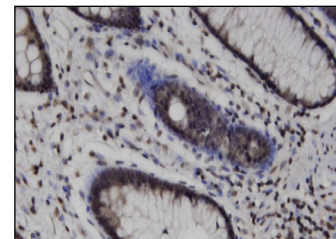
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



MLKL (3B2): sc-293201. Western blot analysis of human recombinant MLKL fusion protein.



MLKL (3B2): sc-293201. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic and membrane staining.

SELECT PRODUCT CITATIONS

- Cao, W.X., et al. 2018. MLKL mediates apoptosis via a mutual regulation with PERK/eIF2α pathway in response to reactive oxygen species generation. *Apoptosis* 23: 521-531.
- Lu, J., et al. 2019. Melatonin suppresses microglial necroptosis by regulating deubiquitinating enzyme A20 after intracerebral hemorrhage. *Front. Immunol.* 10: 1360.
- Mao, K., et al. 2021. An integrative transcriptomic and metabolomic study revealed that melatonin plays a protective role in chronic lung inflammation by reducing necroptosis. *Front. Immunol.* 12: 668002.
- Xu, C., et al. 2021. TNF-α-dependent neuronal necroptosis regulated in Alzheimer's disease by coordination of RIPK1-p62 complex with autophagic UVRAG. *Theranostics* 11: 9452-9469.
- Ma, C., et al. 2022. Calycosin ameliorates atherosclerosis by enhancing autophagy via regulating the interaction between KLF2 and MLKL in apolipoprotein E gene-deleted mice. *Br. J. Pharmacol.* 179: 252-269.
- Xu, H., et al. 2022. Rosin derivative IDOAMP inhibits prostate cancer growth via activating RIPK1/RIPK3/MLKL signaling pathway. *Oxid. Med. Cell. Longev.* 2022: 9325973.
- Yi, Y., et al. 2022. *Staphylococcus aureus*-induced necroptosis promotes mitochondrial damage in goat endometrial epithelial cells. *Animals* 12: 2218.
- Liu, C., et al. 2022. Pramipexole alleviates traumatic brain injury in rats through inhibiting necroptosis. *Neurosci. Lett.* 791: 136911.
- Montagnani Marelli, M., et al. 2023. Necroptosis induced by Delta-tocotrienol overcomes docetaxel chemoresistance in prostate cancer cells. *Int. J. Mol. Sci.* 24: 4923.

RESEARCH USE

For research use only, not for use in diagnostic procedures.