

# MLKL (Y-14): sc-165025

## 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.

## REFERENCES

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2. Manning, G., et al. 2002. The protein kinase complement of the human genome. *Science* 298: 1912-1934.
3. Coupry, I., et al. 2004. Analysis of CBP (CREBBP) gene deletions in Rubinstein-Taybi syndrome patients using real-time quantitative PCR. *Hum. Mutat.* 23: 278-284.
4. Martin, J., et al. 2004. The sequence and analysis of duplication-rich human chromosome 16. *Nature* 432: 988-994.
5. Demir, E., et al. 2005. Giant axonal neuropathy: clinical and genetic study in six cases. *J. Neurol. Neurosurg. Psychiatr.* 76: 825-832.
6. Rakha, E.A., et al. 2006. Chromosome 16 tumor-suppressor genes in breast cancer. *Genes Chromosomes Cancer* 45: 527-535.
7. Gervasini, C., et al. 2007. High frequency of mosaic CREBBP deletions in Rubinstein-Taybi syndrome patients and mapping of somatic and germ-line breakpoints. *Genomics* 90: 567-573.

## CHROMOSOMAL LOCATION

Genetic locus: MLKL (human) mapping to 16q23.1; Mlkl (mouse) mapping to 8 E1.

## SOURCE

MLKL (Y-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MLKL of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-165025 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

MLKL (Y-14) is recommended for detection of MLKL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MLKL (Y-14) is also recommended for detection of MLKL in additional species, including equine and bovine.

Suitable for use as control antibody for MLKL siRNA (h): sc-93430, MLKL siRNA (m): sc-149468, MLKL shRNA Plasmid (h): sc-93430-SH, MLKL shRNA Plasmid (m): sc-149468-SH, MLKL shRNA (h) Lentiviral Particles: sc-93430-V and MLKL shRNA (m) Lentiviral Particles: sc-149468-V.

Molecular Weight of MLKL: 54 kDa.

Positive Controls: mouse kidney extract: sc-2255.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **MLKL (3B2): sc-293201**, our highly recommended monoclonal alternative to MLKL (Y-14).