SANTA CRUZ BIOTECHNOLOGY, INC.

MLK2 (C-20): sc-19125

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mixed lineage kinases are a family of protein kinases sharing two leucine zipper-like motifs, which are known to mediate protein dimerization, and a kinase domain whose primary structure is similar to both the tyrosine-specific and the serine/threonine-specific kinase classes. Members of the mixed-lineage kinase (MLK) family include MLK1, MLK2, MLK3 and dual leucine zipper kinase, also designated DLK. MLKs are expressed in neuronal cells where they are likely to interact between Rac1/Cdc42, MKK4 and MKK7 in death signaling. The human MLK1 gene maps to chromosome 14q24.3-q31 and is expressed in epithelial tumor cell lines of the colon, breast, and esophagus. The human MLK2 gene maps to chromosome 19 q13.2 and encodes a predicted 954 amino acid, src homology 3 (SH3) domain-containing protein. The human MLK3 gene maps to chromosome 11q13.1-13.3 and encodes a 847 amino acid, SH3 domain- and proline rich region-containing protein. Apoptosis mechanisms rely on MLKs as an upstream intermediate of mitochondrial cytochrome c release and caspase activation.

REFERENCES

1. Dorow, D.S., et al. 1993. Identification of a new family of human epithelial protein kinases containing two leucine/isoleucine-zipper domains. Eur. J. Biochem. 213: 701-710.
2. Ing, Y.L., et al. 1994. MLK-3: identification of a widely-expressed protein kinase bearing an SH3 domain and a leucine zipper-basic region domain. Oncogene 9: 1745-1750.
3. Dorow, D.S., et al. 1995. Complete nucleotide sequence, expression, and chromosomal localisation of human mixed-lineage kinase 2. Eur. J. Biochem. 234: 492-500.
4. Hirai, S., et al. 1997. MST/MLK2, a member of the mixed lineage kinase family, directly phosphorylates and activates SEK1, an activator of c-Jun N-terminal kinase/stress-activated protein kinase. J. Biol. Chem. 272: 15167-15173.

CHROMOSOMAL LOCATION

Genetic locus: MAP3K10 (human) mapping to 19q13.2.

SOURCE

MLK2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MLK2 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-19125 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

MLK2 (C-20) is recommended for detection of MLK2 of 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).

MLK2 (C-20) is also recommended for detection of MLK2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for MLK2 siRNA (h): sc-39111, MLK2 shRNA Plasmid (h): sc-39111-SH and MLK2 shRNA (h) Lentiviral Particles: sc-39111-V.

Molecular Weight of MLK2: 103 kDa.

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 or our catalog for detailed protocols and support products.