

# ZPK (N-19): sc-8125

## BACKGROUND

ZPK (leucine-zipper protein kinase, also designated MUK and DLK) is a serine/threonine kinase containing two potential leucine-zipper motifs. ZPK is highly conserved between human and mouse, and is expressed at high levels in the brain and kidney. ZPK exhibits cell type-specific expression in the epithelial compartments of other organ systems including stomach, kidney, liver, and pancreas, and is thought to play a role in the development and maintenance of a variety of specialized cells. ZPK is also thought to act as a negative regulator of cell growth. Expression of ZPK has been correlated with the growth response of hepatocyte subpopulations in regenerating liver tissue. ZPK has also been shown to activate the JNK/SAPK pathway.

## REFERENCES

1. Reddy, U.R., et al. 1994. Cloning of a novel putative protein kinase having a leucine zipper domain from human brain. *Biochem. Biophys. Res. Commun.* 202: 613-620. (published erratum appears in *Biochem. Biophys. Res. Commun.* 205: 1494-1495.)
2. Blouin, R., et al. 1996. Cell-specific expression of the ZPK gene in adult mouse tissues. *DNA.* 15: 631-642.
3. Bergeron, P., et al. 1997. Inhibition of cell growth by overexpression of the ZPK gene. *Biochem. Biophys. Res. Commun.* 231: 153-155.
4. Hirai, S.I., 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.
5. Douziche, M., et al. 1998. Zonal induction of mixed lineage kinase ZPK/DLK/MUK gene expression in regenerating mouse liver. *Biochem. Biophys. Res. Commun.* 249: 927-932.

## SOURCE

ZPK (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ZPK 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-8125 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.

## 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.

## APPLICATIONS

ZPK (N-19) is recommended for detection of ZPK 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).

Suitable for use as control antibody for ZPK siRNA (h): sc-39259, ZPK shRNA Plasmid (h): sc-39259-SH and ZPK shRNA (h) Lentiviral Particles: sc-39259-V.

## 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.