

NKIAMRE (K-17): sc-23812

BACKGROUND

The cell division cycle is regulated by a closely-related family of protein kinases known as cyclin-dependent kinases, or CDKs. CDK family members share high levels of sequence homology between species, suggesting that evolutionarily conserved mechanisms of cell cycle control may exist. NKIAMRE, also designated cyclin-dependent kinase-like 3, is a member of the CDK family. The human NKIAMRE gene maps to chromosome 5q31.1 and encodes a 455 amino acid protein, which is believed to be a tumor suppressor. The NKIAMRE gene was identified as a gene absent in human acute leukemia and myelodysplasia patients with interstitial deletions in chromosome arm 5q31.1. This deleted region may contain tumor suppressor loci that are necessary for normal hematopoiesis. NKIAMRE shares close homology to the cdc2-related kinases NKIATRE, KKIALRE, PISSLRE, PITALRE and KKIAMRE, containing both conserved inhibitory phosphorylation sites and a putative cyclin-binding domain. These kinases influence cell behavior through restricting cell growth or maintaining differentiation.

REFERENCES

1. Grana, X., et al. 1994. PISSLRE, a human novel CDC2-related protein kinase. *Oncogene* 9: 2097-2103.
2. De Luca, A., et al. 1997. CDC2-related kinase PITALRE phosphorylates pRb exclusively on serine and is widely expressed in human tissues. *J. Cell. Physiol.* 172: 265-273.
3. Midmer, M., et al. 1999. Identification of NKIAMRE, the human homologue to the mitogen-activated protein kinase/cyclin-dependent kinase-related protein kinase NKIATRE, and its loss in leukemic blasts with chromosome arm 5q deletion. *Cancer Res.* 59: 4069-4074.
4. Haq, R., et al. 2001. NKIATRE is a novel conserved cdc2-related kinase. *Genomics* 71: 131-141.
5. LocusLink Report (LocusID: 51265). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: CDKL3 (human) mapping to 5q31.1; Cdkl3 (mouse) mapping to 11 B1.3.

SOURCE

NKIAMRE (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NKIAMRE of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23812 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NKIAMRE (K-17) is recommended for detection of NKIAMRE 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).

NKIAMRE (K-17) is also recommended for detection of NKIAMRE in additional species, including equine, canine and bovine.

Suitable for use as control antibody for NKIAMRE siRNA (h): sc-37582, NKIAMRE shRNA Plasmid (h): sc-37582-SH and NKIAMRE shRNA (h) Lentiviral Particles: sc-37582-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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.