

## KKIAMRE (N-20): sc-6287

### BACKGROUND

The activation of signal transduction pathways by growth factors, hormones and neurotransmitters is mediated by the MAP kinases ERK 1 and ERK 2. ERK proteins are regulated by dual phosphorylation at specific tyrosine and threonine sites mapping within a characteristic Thr-Glu-Tyr motif. The protein kinase p56 KKIAMRE is distantly related to the MAP kinase group of proteins and is closely related to p42 KKIALRE. KKIAMRE is predominantly expressed in testis, kidney, brain and lung. KKIAMRE contains the conserved MAP kinase dual phosphorylation motif in the sequence Thr-Asp-Tyr and is activated by treatment of cells by EGF. However, unlike other MAP kinases, the EGF-stimulated kinase activity does not require phosphorylation of KKIAMRE and KKIALRE in the Thr-Asp-Tyr motif.

### REFERENCES

1. Boulton, T.G., et al. 1991. Identification of multiple extracellular signal-related kinases (ERKs) with antipeptide antibodies. *Cell Regul.* 2: 357-371.
2. Bouton, T.G., et al. 1991. ERKs: a family of protein-serine/threonine kinases that are activated and tyrosine phosphorylated in response to insulin and NGF. *Cell* 65: 663-675.
3. Crews, C.M., et al. 1992. Purification of a murine protein-tyrosine/threonine kinase that phosphorylates and activates the Erk-1 gene product: relationship to the fission yeast byr1 gene product. *Proc. Natl. Acad. Sci. USA* 89: 8205-8209.
4. Crews, C.M., et al. 1992. The primary structure of MEK, a protein kinase that phosphorylates the ERK gene product. *Science* 258: 478-480.
5. Meyerson, M., et al. 1992. A family of human cdc2-related protein kinases. *EMBO J.* 11: 2909-2917.
6. Taglienti, C.A., et al. 1996. Molecular cloning of the epidermal growth factor-stimulated protein kinase p56 KKIAMRE. *Oncogene* 13: 2563-2574.

### CHROMOSOMAL LOCATION

Genetic locus: CDKL2 (human) mapping to 4q21.1; Cdkl2 (mouse) mapping to 5 E2.

### SOURCE

KKIAMRE (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of KKIAMRE 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-6287 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

KKIAMRE (N-20) is recommended for detection of KKIAMRE p56 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).

KKIAMRE (N-20) is also recommended for detection of KKIAMRE p56 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for KKIAMRE siRNA (h): sc-37581, KKIAMRE siRNA (m): sc-146491, KKIAMRE shRNA Plasmid (h): sc-37581-SH, KKIAMRE shRNA Plasmid (m): sc-146491-SH, KKIAMRE shRNA (h) Lentiviral Particles: sc-37581-V and KKIAMRE shRNA (m) Lentiviral Particles: sc-146491-V.

Molecular Weight of KKIAMRE: 56 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](http://www.scbt.com) or our catalog for detailed protocols and support products.