

KKIALRE (K-19): sc-7589

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 Reg.* 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: CDKL1 (human) mapping to 14q21.1.

SOURCE

KKIALRE (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-7589 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.

APPLICATIONS

KKIALRE (K-19) is recommended for detection of KKIALRE p42 of human and hamster origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

KKIALRE (K-19) is also recommended for detection of KKIALRE p42 in additional species, including bovine and porcine.

Suitable for use as control antibody for KKIALRE siRNA (h): sc-37580, KKIALRE shRNA Plasmid (h): sc-37580-SH and KKIALRE shRNA (h) Lentiviral Particles: sc-37580-V.

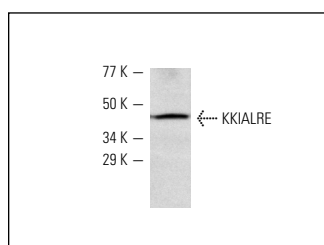
Molecular Weight of KKIALRE: 40-52 kDa.

Positive Controls: CHO-K1 cell lysate: sc-3809.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



KKIALRE (K-19): sc-7589. Western blot analysis of KKIALRE expression in CHO-K1 whole cell lysate.

PROTOCOLS

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