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# KKIALRE (E-8): sc-515654

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: CDKL1 (human) mapping to 14q21.3; Cdk11 (mouse) mapping to 12 C2.

## SOURCE

KKIALRE (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 318-342 near the C-terminus of KKIAMRE of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KKIALRE (E-8) is available conjugated to agarose (sc-515654 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515654 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515654 PE), fluorescein (sc-515654 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515654 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515654 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515654 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515654 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515654 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515654 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515654 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

KKIALRE (E-8) is recommended for detection of KKIALRE p42 of human origin and Cdk11 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for KKIALRE siRNA (h): sc-37580, Cdk11 siRNA (m): sc-142229, KKIALRE shRNA Plasmid (h): sc-37580-SH, Cdk11 shRNA Plasmid (m): sc-142229-SH, KKIALRE shRNA (h) Lentiviral Particles: sc-37580-V and Cdk11 shRNA (m) Lentiviral Particles: sc-142229-V.

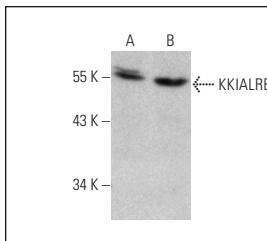
Molecular Weight of KKIALRE: 40-52 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, Caki-1 cell lysate: sc-2224 or K-562 whole cell lysate: sc-2203.

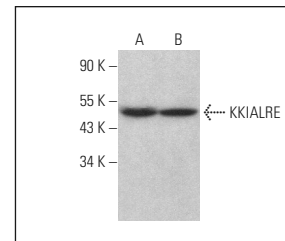
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



KKIALRE (E-8): sc-515654. Western blot analysis of KKIALRE expression in Caki-1 (A) and K-562 (B) whole cell lysates.



KKIALRE (E-8): sc-515654. Western blot analysis of KKIALRE expression in Caki-1 (A) and HEK293 (B) whole cell lysates.

## 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) for detailed protocols and support products.

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