

# κB-Ras1 (E-3): sc-271169

## BACKGROUND

Small guanosine triphosphatases, typified by the mammalian Ras proteins, play major roles in the regulation of numerous cellular pathways. IκB-interacting Ras-like proteins, κB-Ras1 and κB-Ras2, belong to a subclass of evolutionarily conserved Ras-like proteins that differ from other Ras proteins in containing amino acids at positions 12 and 61 that are similar to those present in the oncogenic forms of Ras. These Ras-like proteins, κB-Ras1 and κB-Ras2, interact with the PEST domains of IκBα and IκBβ and decrease their rate of degradation. κB-Ras2 shows 71% identity to κB-Ras1. In cells, κB-Ras proteins are associated only with NFκB:IκBβ complexes and therefore may provide an explanation for the slower rate of degradation of IκBβ compared with IκBα.

## REFERENCES

1. Bos, J.L. 1989. Ras oncogenes in human cancer: a review. *Cancer Res.* 49: 4682-4689.
2. McCormick, F. 1994. Activators and effectors of Ras p21 proteins. *Curr. Opin. Genet. Dev.* 4: 71-76.
3. Bos, J.L. 1998. All in the family? New insights and questions regarding interconnectivity of Ras, Rap1 and Ral. *EMBO J.* 17: 6776-6782.
4. May, M.J. and Ghosh, S. 1998. Signal transduction through NFκB. *Immunol. Today* 19: 80-88.
5. Bos, J.L. 1998. The Ras gene family and human carcinogenesis. *Mutat. Res.* 195: 255-271.
6. Fenwick, C., et al. 2000. A subclass of Ras proteins that regulate the degradation of IκB. *Science* 287: 869-873.

## CHROMOSOMAL LOCATION

Genetic locus: NKIRAS1 (human) mapping to 3p24.2; Nkiras1 (mouse) mapping to 14 A2.

## SOURCE

κB-Ras1 (E-3) is a mouse monoclonal antibody raised against κB-Ras1 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.

κB-Ras1 (E-3) is available conjugated to agarose (sc-271169 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271169 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271169 PE), fluorescein (sc-271169 FITC), Alexa Fluor® 488 (sc-271169 AF488), Alexa Fluor® 546 (sc-271169 AF546), Alexa Fluor® 594 (sc-271169 AF594) or Alexa Fluor® 647 (sc-271169 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271169 AF680) or Alexa Fluor® 790 (sc-271169 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

κB-Ras1 (E-3) is recommended for detection of κB-Ras1 of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (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 κB-Ras1 siRNA (h): sc-41796, κB-Ras1 siRNA (m): sc-41797, κB-Ras1 shRNA Plasmid (h): sc-41796-SH, κB-Ras1 shRNA Plasmid (m): sc-41797-SH, κB-Ras1 shRNA (h) Lentiviral Particles: sc-41796-V and κB-Ras1 shRNA (m) Lentiviral Particles: sc-41797-V.

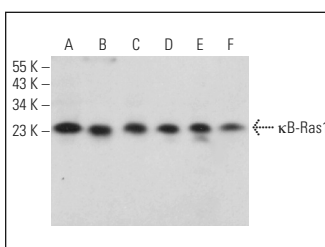
Molecular Weight of κB-Ras1: 22 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, ARPE-19 whole cell lysate: sc-364357 or HeLa whole cell lysate: sc-2200.

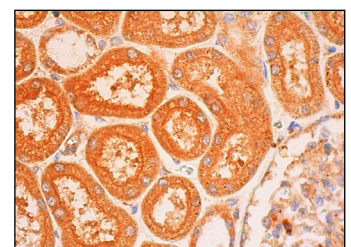
## RECOMMENDED SUPPORT REAGENTS

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™ Molecular Weight Standards: sc-2035, UltraCruz® 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® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



κB-Ras1 (E-3): sc-271169. Western blot analysis of κB-Ras1 expression in HeLa (A), ARPE-19 (B), SH-SY5Y (C), NIH/3T3 (D), Neuro-2A (E) and A-10 (F) whole cell lysates.



κB-Ras1 (E-3): sc-271169. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

## 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.