

# RKIP (FL-187): sc-28837

## BACKGROUND

Raf kinase inhibitor protein (RKIP) is a cytosolic protein that was initially characterized as a phosphatidylethanolamine-binding protein (PBP) expressed in brain tissue and secreted from testis fluid. In addition, RKIP was identified by yeast two-hybrid screening of human T cell libraries directed at identifying proteins that associate with the BXB kinase domain of the serine/threonine kinase, Raf-1. Subsequent *in vitro* and *in vivo* studies indicate that RKIP binds to both the active and inactive forms of Raf-1 and thereby regulates the signaling cascade of the MAP kinase pathway. The specific association of RKIP with kinase-active Raf-1 competitively inhibits the binding and activation of the Raf-1 substrate MEK. RKIP, in turn, affects downstream MAP kinase signaling by decreasing the activation of MEK effector proteins, including ERK1 and ERK2, and the subsequent induction of AP-1 mediated transcription.

## REFERENCE

1. Perry, A.C., et al. 1994. Sequence analysis of a mammalian phospholipid-binding protein from testis and epididymis and its distribution between spermatozoa and extracellular secretions. *Biochem. J.* 301: 235-242.
2. Minden, A., et al. 1994. Differential activation of ERK and JNK mitogen-activated protein kinases by Raf-1 and MEKK. *Science* 266: 1719-1723.

## SOURCE

RKIP (FL-187) is a rabbit polyclonal antibody raised against amino acids 1-187 representing full length RKIP 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.

## APPLICATIONS

RKIP (FL-187) is recommended for detection of RKIP and processed active peptide HCNP of mouse, rat and human origin, and Pebp-2 of mouse 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), 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).

RKIP (FL-187) is also recommended for detection of RKIP and processed active peptide HCNP in additional species, including equine, canine, bovine and porcine.

Molecular Weight of RKIP: 23 kDa.

Positive Controls: rat brain extract: sc-2392, PC-12 cell lysate: sc-2250 or Hep G2 cell lysate: sc-2227.

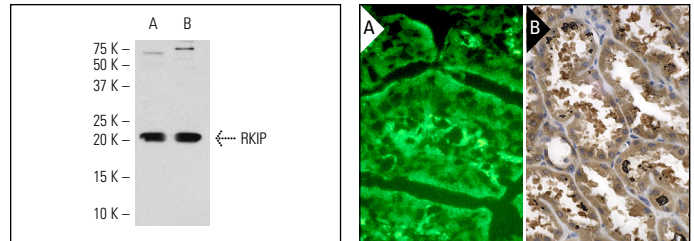
## STORAGE

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.

## DATA



RKIP (FL-187): sc-28837. Western blot analysis of RKIP expression in PC-12 (A) whole cell lysate and rat brain (B) tissue extract.

RKIP (FL-187): sc-28837. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

## SELECT PRODUCT CITATIONS

1. Zhang, L., et al. 2004. Raf kinase inhibitory protein inhibits  $\beta$ -cell proliferation. *Surgery* 136: 708-715.
2. Li, H.Z., et al. 2008. Effects of Raf kinase inhibitor protein expression on metastasis and progression of human epithelial ovarian cancer. *Mol. Cancer Res.* 6: 917-928.
3. Tsao, D.A., et al. 2009. Nitric oxide enhances expression of Raf kinase inhibitor protein in keratinocytes. *Exp. Dermatol.* 18: 571-573.
4. D'Amours, O., et al. 2010. Proteomic comparison of detergent-extracted sperm proteins from bulls with different fertility indexes. *Reproduction* 139: 545-556.
5. Girouard, J., et al. 2011. Comparative proteome and lipid profiles of bovine epididymosomes collected in the intraluminal compartment of the caput and cauda epididymidis. *Int. J. Androl.* 34: e475-e486.
6. Kim, S.O., et al. 2012. Raf-1 kinase inhibitory protein (RKIP) mediates ethanol-induced sensitization of secretagogue signaling in pancreatic acinar cells. *J. Biol. Chem.* 287: 33377-33388.
7. Birner, P., et al. 2012. RAF-kinase inhibitor protein (RKIP) downregulation in esophageal cancer and its metastases. *Clin. Exp. Metastasis* 29: 551-559.
8. Guo, W., et al. 2013. Aberrant methylation and loss expression of RKIP is associated with tumor progression and poor prognosis in gastric cardia adenocarcinoma. *Clin. Exp. Metastasis* 30: 265-275.
9. Cardile, V., et al. 2013. Raf kinase inhibitor protein (RKIP) and phospho-RKIP expression in melanomas. *Acta Histochem.* 115: 795-802.

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Try **RKIP (H-10): sc-376925** or **RKIP (8): sc-101504**, our highly recommended monoclonal alternatives to RKIP (FL-187).