

RKIP (G-15): sc-5422

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 testes 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.

REFERENCES

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.
3. Tohdoh, N., et al. 1995. Sequence homology of rat and human HCNP precursor proteins, bovine phosphatidylethanol-amine-binding protein and rat 23-kDa protein associated with the opioid-binding protein. *Brain Res. Mol. Brain Res.* 30: 381-384.
4. Kolch, W., et al. 1996. Inhibition of Raf-1 signaling by a monoclonal antibody, which interferes with Raf-1 activation and with Mek substrate binding. *Oncogene* 13:1305-1314.
5. Morrison, D.K. and Cutler, R.E. 1997. The complexity of Raf-1 regulation. *Curr. Opin. Cell Biol.* 9: 174-179.
6. Yeung, K., et al. 1999. Suppression of Raf-1 kinase activity and MAP kinase signalling by RKIP. *Nature* 401: 173-177.

CHROMOSOMAL LOCATION

Genetic locus: PEBP1 (human) mapping to 12q24.23; Pebp1 (mouse) mapping to 5 F.

SOURCE

RKIP (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of RKIP of rat 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-5422 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

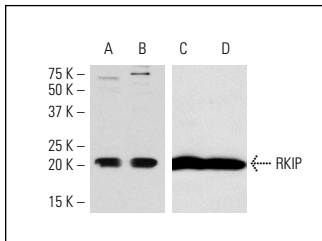
RKIP (G-15) is recommended for detection of RKIP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with Pebp-2 of mouse origin.

Suitable for use as control antibody for RKIP siRNA (h): sc-36430, RKIP siRNA (m): sc-36431, RKIP shRNA Plasmid (h): sc-36430-SH, RKIP shRNA Plasmid (m): sc-36431-SH, RKIP shRNA (h) Lentiviral Particles: sc-36430-V and RKIP shRNA (m) Lentiviral Particles: sc-36431-V.

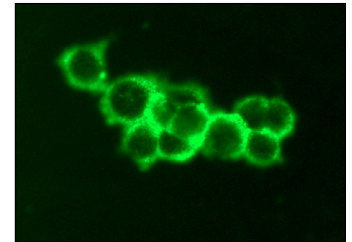
Molecular Weight of RKIP: 23 kDa.

Positive Controls: rat liver extract: sc-2395, rat brain extract: sc-2392 or PC-12 cell lysate: sc-2250.

DATA



Western blot analysis of RKIP expression in PC-12 whole cell lysate (A,C) and mouse brain extract (B,D). Antibodies tested include RKIP (FL-187): sc-28837 (A,B) and RKIP (G-15): sc-5422 (C,D).



RKIP (G-15): sc-5422. Immunofluorescence staining of methanol-fixed PC-12 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Chen, G., et al. 2003. Protein profiles associated with survival in lung adenocarcinoma. *Proc. Natl. Acad. Sci. USA* 100: 13537-13542.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **RKIP (H-10): sc-376925** or **RKIP (8): sc-101504**, our highly recommended monoclonal alternatives to RKIP (G-15).