

# CRIK (C-20): sc-1848

## BACKGROUND

Rho, the Ras-related small GTPase, is responsible for the regulation of actin-based cytoskeletal structures including stress fibers, focal adhesions, and the contractile ring apparatus. The Citron Rho-interacting kinase (CRIK) is a serine/threonine kinase that belongs to the myotonic dystrophy kinase family and is a known effector of Rho. CRIK can be alternatively spliced to produce two isoforms, CRIK and CRIK-short kinase (SK). CRIK contains the kinase domain which is followed by the Citron sequence, and CRIK-SK consists mostly of the kinase domain. Both isoforms are capable of phosphorylating exogenous substrates as well as autophosphorylation. The CRIK kinase domain is related to the Rho-associated kinase (ROK), which is a target for Rho and induces the formation of focal adhesions and stress fibers. CRIK is thought to regulate cytokinesis as it localizes to the cleavage furrow and mid-body of HeLa cells during the contractile process.

## REFERENCES

1. Kitagawa, M., et al. 1995. Purification and characterization of a fatty acid-activated protein kinase (PKN) from rat testis. *Biochem. J.* 310: 657-664.
2. Madaule, P., et al. 1995. A novel partner for the GTP-bound forms of Rho and Rac. *FEBS Lett.* 377: 243-248.
3. Amano, M., et al. 1996. Identification of a putative target for Rho as the serine-threonine kinase protein kinase N. *Science* 271: 648-650.
4. Mukai, H., et al. 1996. PKN associates and phosphorylates the head-rod domain of neurofilament protein. *J. Biol. Chem.* 271: 9816-9822.
5. Kitagawa, M., et al. 1996. The role of the unique motifs in the amino-terminal region of PKN on its enzymatic activity. *Biochem. Biophys. Res. Commun.* 220: 963-968.

## CHROMOSOMAL LOCATION

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

## SOURCE

CRIK (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CRIK of mouse 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-1848 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

CRIK (C-20) is recommended for detection of CRIK 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).

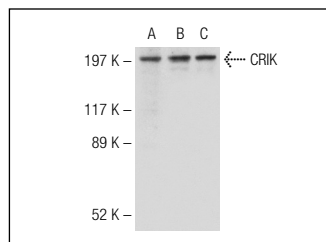
CRIK (C-20) is also recommended for detection of CRIK in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CRIK siRNA (h): sc-39214, CRIK siRNA (m): sc-39215, CRIK shRNA Plasmid (h): sc-39214-SH, CRIK shRNA Plasmid (m): sc-39215-SH, CRIK shRNA (h) Lentiviral Particles: sc-39214-V and CRIK shRNA (m) Lentiviral Particles: sc-39215-V.

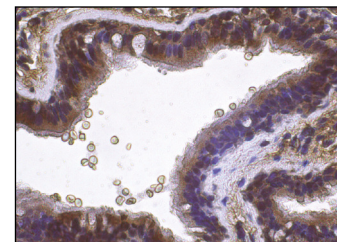
Molecular Weight (predicted) of CRIK isoforms: 231/54/177/237 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or BJAB whole cell lysate: sc-2207.

## DATA



CRIK (C-20): sc-1848. Western blot analysis of CRIK expression in HeLa (A), Jurkat (B) and BJAB (C) whole cell lysates.



CRIK (C-20): sc-1848. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

## SELECT PRODUCT CITATIONS

1. Di Cunto, F., et al. 1998. Citron Rho-interacting kinase, a novel tissue-specific Ser/Thr kinase encompassing the Rho-Rac-binding protein citron. *J. Biol. Chem.* 273: 29706-29711.
2. Grossi, M., et al. 2005. Negative control of keratinocyte differentiation by Rho/CRIK signaling coupled with up-regulation of KyoT1/2 (FHL1) expression. *Proc. Natl. Acad. Sci. USA* 102: 11313-11318.
3. Shafikhani, S.H., et al. 2006. *Pseudomonas aeruginosa* type III-secreted toxin ExoT inhibits host-cell division by targeting cytokinesis at multiple steps. *Proc. Natl. Acad. Sci. USA* 103: 15605-15610.
4. Kamijo, K., et al. 2006. Dissecting the role of Rho-mediated signaling in contractile ring formation. *Mol. Biol. Cell* 17: 43-55.

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Try **CRIK (E-6): sc-390437** or **CRIK (C-5): sc-377449**, our highly recommended monoclonal alternatives to CRIK (C-20).