SANTA CRUZ BIOTECHNOLOGY, INC.

CRIK (C-5): sc-377449

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Leung, T., et al. 1996. The p160 RhoA-binding kinase ROK α is a member of a kinase family and is involved in the reorganization of the cytoskeleton. Mol. Cell. Biol. 16: 5313-5327.
2. 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.
3. Lyons-Warren, A., et al. 2005. Evidence of association between bipolar disorder and Citron on chromosome 12q24. Mol. Psychiatry 10: 807-809.
4. Gruneberg, U., et al. 2006. KIF14 and Citron kinase act together to promote efficient cytokinesis. J. Cell Biol. 172: 363-372.
5. Kamijo, K., et al. 2006. Dissecting the role of Rho-mediated signaling in contractile ring formation. Mol. Biol. Cell 17: 43-55.
6. Berto, G., et al. 2007. The Down syndrome critical region protein TTC3 inhibits neuronal differentiation via RhoA and Citron kinase. J. Cell Sci. 120: 1859-1867.
7. Tan, I., et al. 2011. Chelerythrine perturbs lamellar actomyosin filaments by selective inhibition of myotonic dystrophy kinase-related Cdc42-binding kinase. FEBS Lett. 585: 1260-1268.

CHROMOSOMAL LOCATION

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

SOURCE

CRIK (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1569-1597 at the C-terminus of CRIK of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377449 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CRIK (C-5) is recommended for detection of CRIK 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CRIK (C-5) is also recommended for detection of CRIK in additional species, including equine, canine, bovine and porcine.

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.

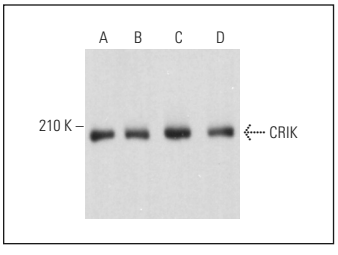
Molecular Weight of CRIK isoforms: 231/54/177/237 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

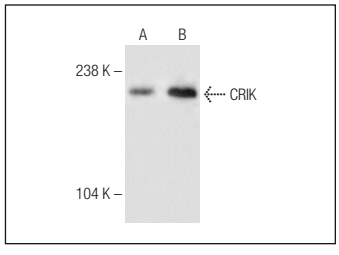
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CRIK (C-5): sc-377449. Western blot analysis of CRIK expression in Jurkat (**A**), Ramos (**B**), A-431 (**C**) and HEL 92.1.7 (**D**) whole cell lysates.



CRIK (C-5): sc-377449. Western blot analysis of CRIK expression in BJAB (**A**) and Jurkat (**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.