

# CRIK (C-5): sc-377449

## 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. CRK (Citron Rho-interacting kinase), also known as CIT, citron or STK21, is a 2,027 amino acid cytoplasmic protein that belongs to the protein kinase superfamily and the AGC Ser/Thr protein kinase family. Containing an AGC-kinase C-terminal domain, a CNH domain, a PH domain, a phorbol-ester/DAG-type zinc finger and a protein kinase domain, CRK is suggested to play a role in the regulation of cytokinesis and the development of the central nervous system. CRK is required for KIF14 localization to the central spindle and midbody. CRK exists as four alternatively spliced isoforms and is encoded by a gene located on chromosome 12q24.23.

## REFERENCES

1. Leung, T., et al. 1996. The p160 RhoA-binding kinase ROK  $\alpha$  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

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\gamma_1$  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  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

CRK (C-5) is recommended for detection of CRK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

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

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

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

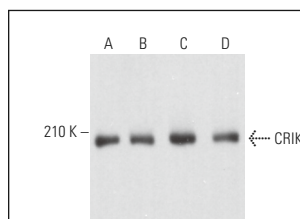
Positive Controls: BJAB whole cell lysate: sc-2207, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

## RECOMMENDED SUPPORT REAGENTS

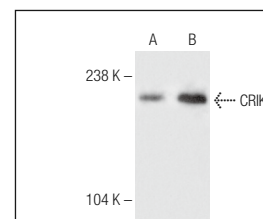
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



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



CRK (C-5): sc-377449. Western blot analysis of CRK 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.