SANTA CRUZ BIOTECHNOLOGY, INC.

CRIK (E-6): sc-390437

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. CRIK (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, CRIK is suggested to play a role in the regulation of cytokinesis and the development of the central nervous system. CRIK is required for KIF14 localization to the central spindle and midbody. CRIK 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 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.

CHROMOSOMAL LOCATION

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

SOURCE

CRIK (E-6) 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CRIK (E-6) is available conjugated to agarose (sc-390437 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390437 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390437 PE), fluorescein (sc-390437 FITC), Alexa Fluor® 488 (sc-390437 AF488), Alexa Fluor® 546 (sc-390437 AF546), Alexa Fluor® 594 (sc-390437 AF594) or Alexa Fluor® 647 (sc-390437 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390437 AF680) or Alexa Fluor® 790 (sc-390437 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390437 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

CRIK (E-6) 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).

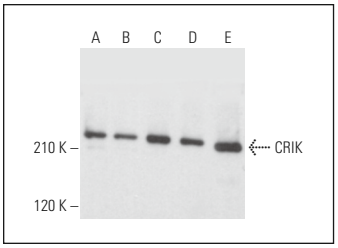
CRIK (E-6) is also recommended for detection of CRIK in additional species, including equine, canine, bovine and porcine.

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.

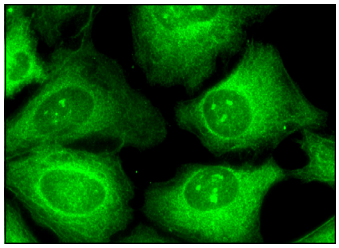
Molecular Weight of CRIK isoforms: 231/54/177/237 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, F9 cell lysate: sc-2245 or DU 145 cell lysate: sc-2268.

DATA



CRIK (E-6): sc-390437. Western blot analysis of CRIK expression in Jurkat (**A**), ALL-SIL (**B**), DU 145 (**C**), WEHI-231 (**D**) and F9 (**E**) whole cell lysates.



CRIK (E-6): sc-390437. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization.

SELECT PRODUCT CITATIONS

1. Tran, T.H.Y., et al. 2019. Citron kinase interacts with LATS2 and inhibits its activity by occluding its hydrophobic phosphorylation motif. J. Mol. Cell Biol. 11: 1006-1017.
2. Kim, N., et al. 2021. MITF promotes cell growth, migration and invasion in clear cell renal cell carcinoma by activating the RhoA/YAP signal pathway. Cancers 13: 2920.
3. Park, S., et al. 2023. The mammalian midbody and midbody remnant are assembly sites for RNA and localized translation. Dev. Cell 58: 1917-1932.e6.

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.