SANTA CRUZ BIOTECHNOLOGY, INC.

RICK (A-10): sc-166765

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the tumor necrosis factor receptor (TNFR) family play a key role in the induction of NFκB activation and cell death. These receptors recruit and assemble signaling complexes that contain a number of death-domain containing proteins, such as RIP. RICK, also designated RIP2 and CARDIAK, is a RIP-like protein kinase involved in regulating both TNFR and CD95-mediated apoptosis. RICK contains an N-terminal serine-threonine kinase catalytic domain and a C-terminal caspase-recruiting domain. The C-terminal domain is sufficient for the apoptotic functions of the protein, while the whole protein is required for the activation of NFκB. RICK binds specifically to a number of proteins in the TNFR-associated factor (TRAF) family, and these TRAF interactions are involved in recruiting RICK to receptor signaling complexes. Overexpression of RICK leads to the activation of caspase-8 and potentiates apoptosis induced by Fas ligand, FADD, CLARP and caspase-8.

CHROMOSOMAL LOCATION

Genetic locus: RIPK2 (human) mapping to 8q21.3.

SOURCE

RICK (A-10) is a mouse monoclonal antibody raised against amino acids 241-540 of RICK of human 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.

RICK (A-10) is available conjugated to agarose (sc-166765 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166765 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166765 PE), fluorescein (sc-166765 FITC), Alexa Fluor® 488 (sc-166765 AF488), Alexa Fluor® 546 (sc-166765 AF546), Alexa Fluor® 594 (sc-166765 AF594) or Alexa Fluor® 647 (sc-166765 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166765 AF680) or Alexa Fluor® 790 (sc-166765 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

RICK (A-10) is recommended for detection of RICK of 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).

Suitable for use as control antibody for RICK siRNA (h): sc-37389, RICK shRNA Plasmid (h): sc-37389-SH and RICK shRNA (h) Lentiviral Particles: sc-37389-V.

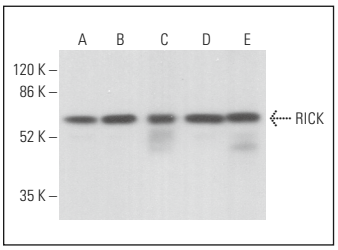
Molecular Weight of RICK: 61 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or Ramos cell lysate: sc-2216.

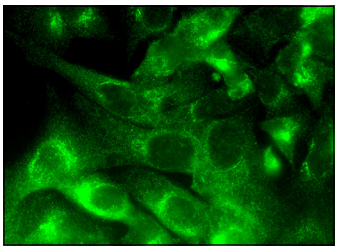
RECOMMENDED SUPPORT REAGENTS

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



RICK (A-10): sc-166765. Western blot analysis of RICK expression in K-562 (**A**), HeLa (**B**), Ramos (**C**), THP-1 (**D**) and Caki-1 (**E**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



RICK (A-10): sc-166765. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Goncharov, T., et al. 2018. Disruption of XIAP-RIP2 association blocks NOD2-mediated inflammatory signaling. Mol. Cell 69: 551-565.e7.
2. Ellwanger, K., et al. 2019. XIAP controls RIPK2 signaling by preventing its deposition in speck-like structures. Life Sci. Alliance 2: e201900346.
3. Huang, C., et al. 2019. LACC1 required for NOD2-induced, ER stress-mediated innate immune outcomes in human macrophages and LACC1 risk variants modulate these outcomes. Cell Rep. 29: 4525-4539.e4.
4. Steinle, H., et al. 2021. 14-3-3 and erlin proteins differentially interact with RIPK2 complexes. J. Cell Sci. 134: jcs258137.
5. Yan, Y., et al. 2022. Receptor-interacting protein kinase 2 (RIPK2) stabilizes c-Myc and is a therapeutic target in prostate cancer metastasis. Nat. Commun. 13: 669.
6. Mehto, S., et al. 2022. Selective autophagy of RIPosomes maintains innate immune homeostasis during bacterial infection. EMBO J. 41: e111289.

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 for detailed protocols and support products.