SANTA CRUZ BIOTECHNOLOGY, INC.

RICK (25): sc-136059

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.

REFERENCES

1. Ware, C.F., et al. 1996. Apoptois mediated by the TNF-related cytokine and receptor families. J. Cell. Biochem. 60: 47-55.
2. Marsters, S.A., et al. 1996. Apo-3, a new member of the tumor necrosis factor receptor family contains a death domain and activates apoptosis and NFκB. Curr. Biol. 6: 1669-1676.
3. Lee, S.Y., et al. 1997. TRAF2 is essential for JNK but not NFκB activation and regulates lymphocyte proliferation and survival. Immunity 7: 703-713.
4. Thome, M., et al. 1998. Identification of CARDIAK, a RIP-like kinase that associates with caspase-1. Curr. Biol. 8: 885-888.
5. Inohara, N., et al. 1998. RICK, a novel protein kinase containing a caspase recruitment domain, interacts with CLARP and regulates CD95-mediated apoptosis. J. Biol. Chem. 273: 12296-12300.
6. McCarthy, J.V., et al. 1998. RIP2 is a novel NFκB-activating and cell death-inducing kinase. J. Biol. Chem. 273: 16968-16975.
7. Kobayashi, K., et al. 2002. RICK/Rip2/CARDIAK mediates signalling for receptors of the innate and adaptive immune systems. Nature 416: 194-199.
8. Park, J.H., et al. 2007. RICK/RIP2 mediates innate immune responses induced through Nod1 and Nod2 but not TLRs. J. Immunol. 178: 2380-2386.
9. Lecine, P., et al. 2007. The NOD2-RICK complex signals from the plasma membrane. J. Biol. Chem. 282: 15197-15207.

CHROMOSOMAL LOCATION

Genetic locus: RIPK2 (human) mapping to 8q21.3; Ripk2 (mouse) mapping to 4 A2.

SOURCE

RICK (25) is a mouse monoclonal antibody raised against amino acids 333-532 of RICK of human origin.

PRODUCT

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

APPLICATIONS

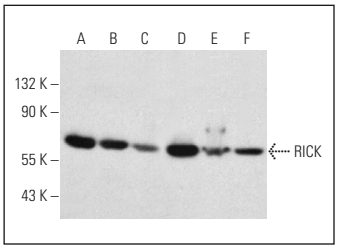
RICK (25) is recommended for detection of RICK of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for RICK siRNA (h): sc-37389, RICK siRNA (m): sc-152957, RICK shRNA Plasmid (h): sc-37389-SH, RICK shRNA Plasmid (m): sc-152957-SH, RICK shRNA (h) Lentiviral Particles: sc-37389-V and RICK shRNA (m) Lentiviral Particles: sc-152957-V.

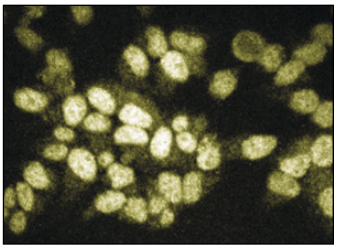
Molecular Weight of RICK: 61 kDa.

Positive Controls: SK-MEL-28 cell lysate: sc-2236, ECV304 cell lysate: sc-2269 or A-431 whole cell lysate: sc-2201.

DATA



RICK (25): sc-136059. Western blot analysis of RICK expression in SK-MEL-28 (**A**), ECV304 (**B**), A-431 (**C**), RAW 264.7 (**D**), NIH/3T3 (**E**) and C6 (**F**) whole cell lysates.



RICK (25): sc-136059. Immunofluorescence staining of HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Singel, S.M., et al. 2014. Receptor-interacting protein kinase 2 promotes triple-negative breast cancer cell migration and invasion via activation of nuclear factor-κB and c-Jun N-terminal kinase pathways. Breast Cancer Res. 16: R28.

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. Not for resale.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **RICK (A-10): sc-166765** for RICK antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.