

RICK (25): sc-136059



The Power to Question

BACKGROUND

Members of the tumor necrosis factor receptor (TNFR) family play a key role in the induction of NF κ B 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 NF κ B. 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

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- Lee, S.Y., et al. 1997. TRAF2 is essential for JNK but not NF κ B activation and regulates lymphocyte proliferation and survival. *Immunity* 7: 703-713.
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- 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.
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- Kobayashi, K., et al. 2002. RICK/Rip2/CARDIAK mediates signalling for receptors of the innate and adaptive immune systems. *Nature* 416: 194-199.
- 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.
- 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 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

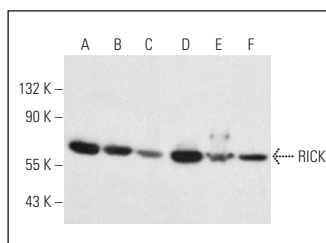
RICK (25) is recommended for detection of RICK of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution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

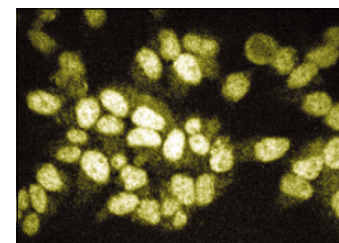
Molecular Weight of RICK: 61 kDa.

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

- 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- κ B and c-Jun N-terminal kinase pathways. *Breast Cancer Res.* 16: R28.
- Zheng, S., et al. 2023. OTUD1 ameliorates cerebral ischemic injury through inhibiting inflammation by disrupting K63-linked deubiquitination of RIP2. *J. Neuroinflammation* 20: 281.

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.



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.