

RIP4 (E-7): sc-377368

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. RIP4, also known as RPK4 (receptor-interacting serine/threonine-protein kinase 4), PKK (PKC δ -interacting protein kinase), DIK, ANKK2 or ANKRD3 (ankyrin repeat domain-containing protein 3), is a peripheral membrane protein that belongs to the TKL Ser/Thr protein kinase family and functions as a receptor-interacting protein (RIP) that modulates epidermal growth and differentiation. RIPs interact with the intracellular domain of tumor necrosis factor receptors (TNFRs) and facilitate downstream signaling and apoptosis induction. RIP4 contains ten ankyrin-repeats and one protein kinase domain, and participates in the activation of NF κ B. Two isoforms exist due to alternative splicing events.

REFERENCES

1. Bhr, C., et al. 2000. DIK, a novel protein kinase that interacts with protein kinase C δ . Cloning, characterization, and gene analysis. *J. Biol. Chem.* 27: 36350-36357.
2. Holland, P., et al. 2002. RIP4 is an ankyrin repeat-containing kinase essential for keratinocyte differentiation. *Curr. Biol.* 12: 1424-1428.
3. Meylan, E., et al. 2002. RIP4 (DIK/PKK), a novel member of the RIP kinase family, activates NF κ B and is processed during apoptosis. *EMBO Rep.* 3: 1201-1208.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605706. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: RPK4 (human) mapping to 21q22.3; Ripk4 (mouse) mapping to 16 C4.

SOURCE

RIP4 (E-7) is a mouse monoclonal antibody raised against amino acids 525-607 mapping near the C-terminus of RIP4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RIP4 (E-7) is available conjugated to agarose (sc-377368 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377368 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377368 PE), fluorescein (sc-377368 FITC), Alexa Fluor[®] 488 (sc-377368 AF488), Alexa Fluor[®] 546 (sc-377368 AF546), Alexa Fluor[®] 594 (sc-377368 AF594) or Alexa Fluor[®] 647 (sc-377368 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-377368 AF680) or Alexa Fluor[®] 790 (sc-377368 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

RIP4 (E-7) is recommended for detection of RIP4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for RIP4 siRNA (h): sc-91500, RIP4 siRNA (m): sc-152974, RIP4 shRNA Plasmid (h): sc-91500-SH, RIP4 shRNA Plasmid (m): sc-152974-SH, RIP4 shRNA (h) Lentiviral Particles: sc-91500-V and RIP4 shRNA (m) Lentiviral Particles: sc-152974-V.

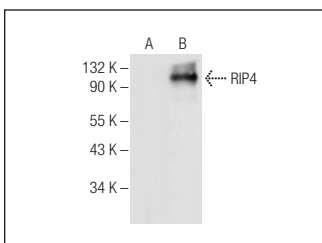
Molecular Weight of RIP4: 100 kDa.

Positive Controls: RIP4 (m): 293T Lysate: sc-123210, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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



RIP4 (E-7): sc-377368. Western blot analysis of RIP4 expression in non-transfected: sc-117752 (A) and mouse RIP4 transfected: sc-123210 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Qi, Z.H., et al. 2018. RPK4/PEBP1 axis promotes pancreatic cancer cell migration and invasion by activating RAF1/MEK/ERK signaling. *Int. J. Oncol.* 52: 1105-1116.

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.