

RIP4 (387.1): sc-100428

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

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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/>
5. Moran, S.T., et al. 2003. Protein kinase C-associated kinase can activate NF κ B in both a kinase-dependent and a kinase-independent manner. *J. Biol. Chem.* 278: 21526-21533.
6. Cariappa, A., et al. 2003. A catalytically inactive form of protein kinase C-associated kinase/receptor interacting protein 4, a protein kinase C β -associated kinase that mediates NF κ B activation, interferes with early B cell development. *J. Immunol.* 171: 1875-1880.
7. Pellegrini-Calace, M. and Tramontano, A. 2006. Identification of a novel putative mitogen-activated kinase cascade on human chromosome 21 by computational approaches. *Bioinformatics* 22: 775-778.
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9. Adams, S., et al. 2007. Regulation of NF κ B activity and keratinocyte differentiation by the RIP4 protein: implications for cutaneous wound repair. *J. Invest. Dermatol.* 127: 538-544.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: RIPK4 (human) mapping to 21q22.3.

SOURCE

RIP4 (387.1) is a mouse monoclonal antibody raised against recombinant RIP4 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RIP4 (387.1) is recommended for detection of RIP4 of human 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 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 shRNA Plasmid (h): sc-91500-SH and RIP4 shRNA (h) Lentiviral Particles: sc-91500-V.

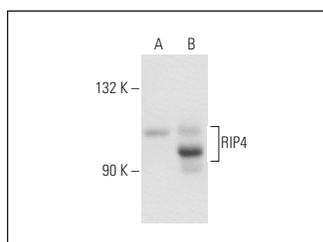
Molecular Weight of RIP4: 100 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, RIP4 (h): 293T Lysate: sc-177871 or HeLa whole cell lysate: sc-2200.

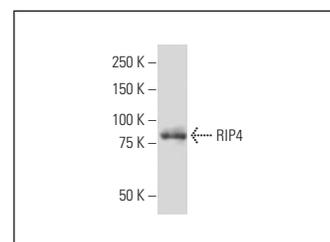
RECOMMENDED SUPPORT REAGENTS

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).

DATA



RIP4 (387.1): sc-100428. Western blot analysis of RIP4 expression in non-transfected: sc-117752 (A) and human RIP4 transfected: sc-177871 (B) 293T whole cell lysates.



RIP4 (387.1): sc-100428. Western blot analysis of RIP4 expression in A-431 whole cell lysate.

RESEARCH USE

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