

# RIP5 (C-14): sc-162107

## 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. RIP5 (receptor interacting protein kinase 5), also known as RIPK5, DustyPK or SGK496 (sugen kinase 496), is a 929 amino acid protein that localizes to the cytoplasm, contains one protein kinase domain and belongs to the Ser/Thr protein kinase family. Expressed at low levels in placenta, heart, brain, kidney, pancreas, testis and skeletal muscle, RIP5 catalyzes the ATP-dependent phosphorylation of target proteins and is thought to induce both caspase-dependent and -independent cell death. Four isoforms of RIP5 exist due to alternative splicing events.

## REFERENCES

- Bairoch, A. and Claverie, J.M. 1988. Sequence patterns in protein kinases. *Nature* 331: 22.
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- Hunter, T. 1991. Protein kinase classification. *Meth. Enzymol.* 200: 3-37.
- Hanks, S.K. and Quinn, A.M. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. *Meth. Enzymol.* 200: 38-62.
- Zha, J., Zhou, Q., Xu, L.G., Chen, D., Li, L., Zhai, Z. and Shu, H.B. 2004. RIP5 is a RIP-homologous inducer of cell death. *Biochem. Biophys. Res. Commun.* 319: 298-303.
- Peng, J., Dong, W., Chen, Y., Mo, R., Cheng, J.F., Hui, C.C., Mohandas, N. and Huang, C.H. 2006. Dusty protein kinases: primary structure, gene evolution, tissue specific expression and unique features of the catalytic domain. *Biochim. Biophys. Acta* 1759: 562-572.

## CHROMOSOMAL LOCATION

Genetic locus: DSTYK (human) mapping to 1q32.1; Dstyk (mouse) mapping to 1 E4.

## SOURCE

RIP5 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RIP5 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-162107 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

RIP5 (C-14) is recommended for detection of RIP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with RIP or RIP3.

RIP5 (C-14) is also recommended for detection of RIP5 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RIP5 siRNA (h): sc-88815, RIP5 siRNA (m): sc-152975, RIP5 shRNA Plasmid (h): sc-88815-SH, RIP5 shRNA Plasmid (m): sc-152975-SH, RIP5 shRNA (h) Lentiviral Particles: sc-88815-V and RIP5 shRNA (m) Lentiviral Particles: sc-152975-V.

Molecular Weight (predicted) of RIP5: 105 kDa.

Molecular Weight (observed) of RIP5: 119 kDa.

Positive Controls: Daudi cell lysate: sc-2415 or Ramos cell lysate: sc-2216.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.