

# RACK7 (S-14): sc-85863

## BACKGROUND

Members of the protein kinase C (PKC) family play a key regulatory role in a variety of cellular functions including cell growth and differentiation, gene expression, hormone secretion and membrane function. Receptor for activated C kinases, termed RACKs, are intracellular receptors for activated PKC that serve as anchors and may be involved in the activation-induced translocation of PKC. RACK7 (receptor for activated C kinase 7), also known as ZMYND8 (zinc finger MYND domain-containing protein 8), PRKCBP1 (protein kinase C (PKC)-binding protein 1) or PRO2893, is a widely expressed protein with predominant expression in pancreas, lung, placenta and brain. RACK7 contains one bromodomain, one PHD-type zinc finger, one MYND-type zinc finger and one PWWP domain. Via its C-terminus, RACK7 interacts with PKC  $\beta$  and is believed to play a role in PKC signaling and function as a transcription regulator. In response to DNA damage, RACK7 is phosphorylated by ATM or ATR. In addition, multiple isoforms exist for RACK7.

## REFERENCES

1. Fossey, S.C., et al. 2000. Identification and characterization of PRKCBP1, a candidate RACK-like protein. *Mamm. Genome* 11: 919-925.
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3. Park, J., et al. 2002. Mutation profiling of mismatch repair-deficient colorectal cancers using an in silico genome scan to identify coding microsatellites. *Cancer Res.* 62: 1284-1288.
4. Ansieau, S. and Sergeant, A. 2003. BS69 and RACK7, a potential novel class of tumor suppressor genes. *Pathol. Biol.* 51: 397-399.
5. Westendorf, J.J. and Koka, S. 2004. Identification of FHOD1-binding proteins and mechanisms of FHOD1-regulated Actin dynamics. *J. Cell. Biochem.* 92: 29-41.
6. Miles, R.R., et al. 2005. Analysis of BCL6-interacting proteins by tandem mass spectrometry. *Mol. Cell Proteomics* 4: 1898-1909.
7. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. *Cell* 125: 801-814.
8. Györfy, B., et al. 2008. A snapshot of microarray-generated gene expression signatures associated with ovarian carcinoma. *Int. J. Gynecol. Cancer.* 18: 1215-1233.

## CHROMOSOMAL LOCATION

Genetic locus: ZMYND8 (human) mapping to 20q13.12; Zmynd8 (mouse) mapping to 2 H3.

## SOURCE

RACK7 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RACK7 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85863 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

RACK7 (S-14) is recommended for detection of RACK7 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 RACK1.

RACK7 (S-14) is also recommended for detection of RACK7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RACK7 siRNA (h): sc-76337, RACK7 siRNA (m): sc-152674, RACK7 shRNA Plasmid (h): sc-76337-SH, RACK7 shRNA Plasmid (m): sc-152674-SH, RACK7 shRNA (h) Lentiviral Particles: sc-76337-V and RACK7 shRNA (m) Lentiviral Particles: sc-152674-V.

Molecular Weight of RACK7: 132 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or K-562 nuclear extract: sc-2130.

## 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.