

RACK7 (RF-9): sc-100824

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 β 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.
2. Zhang, Y., et al. 2001. Identification of differentially expressed genes following treatment of monkey kidney cells with the mycotoxin fumonisin B₁. *Food Chem. Toxicol.* 39: 45-53.
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.

SOURCE

RACK7 (RF-9) is a mouse monoclonal antibody raised against recombinant RACK7 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

RACK7 (RF-9) is recommended for detection of RACK7 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 RACK7 siRNA (h): sc-76337, RACK7 shRNA Plasmid (h): sc-76337-SH and RACK7 shRNA (h) Lentiviral Particles: sc-76337-V.

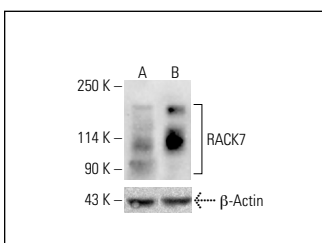
Molecular Weight of RACK7: 132 kDa.

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

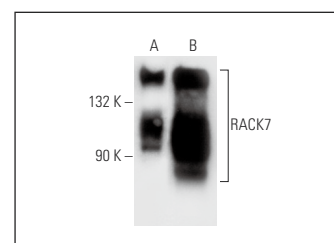
RECOMMENDED SUPPORT REAGENTS

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



RACK7 (RF-9): sc-100824. Western blot analysis of RACK7 expression in untreated (A) and chemically-treated (B) K-562 whole cell lysates. β -Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



RACK7 (RF-9): sc-100824. Western blot analysis of RACK7 expression in 293T whole cell lysate (A) and HeLa nuclear extract (B).

SELECT PRODUCT CITATIONS

1. Li, N., et al. 2016. ZMYND8 reads the dual histone mark H3K4me1-H3K14ac to antagonize the expression of metastasis-linked genes. *Mol. Cell* 63: 470-484.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.