SANTA CRUZ BIOTECHNOLOGY, INC.

RACK1 (h4): 293T Lysate: sc-171439

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 may be involved in the activation-induced translocation of PKC. RACK1 (receptor for activated C kinase 1) is a G protein β subunit-like protein that functions as a RACK and inhibits the activity of Src tyrosine kinases. In response to PKC activation, the intracellular localization of RACK1 and PKC β2 changes, and RACK1 and PKC β2 colocalize to the same sites. RACK1 is therefore thought to be a shuttling protein for PKC β2. A deficit in RACK1 may be associated with impaired PKC activation in the aging brain.

REFERENCES

1. Nishizuka, Y. 1984. The role of protein kinase C in cell surface signal transduction and tumour promotion. Nature 308: 693-698.
2. Nishizuka, Y. 1984. Turnover of inositol phospholipids and signal transduction. Science 225: 1365-1370.
3. Mochly-Rosen, D., Khaner, H. and Lopez, J. 1991. Identification of intracellular receptor proteins for activated protein kinase C. Proc. Natl. Acad. Sci. USA 88: 3997-4000.
4. Ron, D., Chen, C.H., Caldwell, J., Jamieson, L., Orr, E. and Mochly-Rosen, D. 1994. Cloning of an intracellular receptor for protein kinase C: a homolog of the β subunit of G proteins. Proc. Natl. Acad. Sci. USA 91: 839-843.
5. Chang, B.Y., Conroy, K.B., Machleder, E.M. and Cartwright, C.A. 1998. RACK1, a receptor for activated C kinase and a homolog of the β subunit of G proteins, inhibits activity of src tyrosine kinases and growth of NIH/3T3 cells. Mol. Cell. Biol. 18: 3245-3256.
6. Dorit, R., Jiang, Z., Yao, L., Vagts, A., Diamond, I, and Gordon, A. 1999. Coordinated movement of RACK1 with activated bII PKC. J. Biol. Chem. 274: 27039-27046.

CHROMOSOMAL LOCATION

Genetic locus: RACK1 (human) mapping to 5q35.3.

PRODUCT

RACK1 (h4): 293T Lysate represents a lysate of human RACK1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

RACK1 (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive RACK1 antibodies. Recommended use: 10-20 µl per lane.

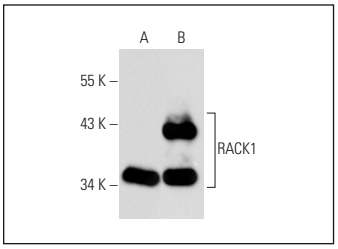
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RACK1 (B-3): sc-17754 is recommended as a positive control antibody for Western Blot analysis of enhanced human RACK1 expression in RACK1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

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

DATA



RACK1 (B-3): sc-17754. Western blot analysis of RACK1 expression in non-transfected: sc-117752 (**A**) and human RACK1 transfected: sc-171439 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.