SANTA CRUZ BIOTECHNOLOGY, INC.

RANK (m): 293T Lysate: sc-122962

BACKGROUND

Members of the tumor necrosis factor (TNF) receptor superfamily interact with signaling molecules of the TNF receptor-associated factor (TRAF) family to activate the NFκB and JNK pathways. RANK (receptor activator of NFκB) is a member of the TNF-R family identified on dendritic cells. This type I membrane receptor is expressed in a broad range of tissues. The C-terminus of RANK is required for RANK to bind TRAF2, 5 and 6, and it is also necessary for stimulating NFκB activation. The ligand for this receptor, RANKL (also designated TRANCE or ODF), is a type II transmembrane protein expressed primarily in lymphoid tissues and T cell lines. RANKL appears to be an important regulator of T cells and osteoclasts.

REFERENCES

1. Wong, B.R., et al. 1997. TRANCE is a novel ligand of the tumor necrosis factor receptor family that activates c-Jun N-terminal kinase in T cells. J. Biol. Chem. 272: 25190-25194.
2. Natoli, G., et al. 1997. Tumor necrosis factor (TNF) receptor 1 signaling downstream of TNF receptor-associated factor 2. Nuclear factor κB (NFκB)-inducing kinase requirement for activation of activating protein 1 and NFκB but not of c-Jun N-terminal kinase/stress-activated protein kinase. J. Biol. Chem. 272: 26079-26082.
3. Shi, C.S., et al. 1997. Activation of stress-activated protein kinase/c-Jun N-terminal kinase, but not NFκB, by the tumor necrosis factor (TNF) receptor 1 through a TNF receptor-associated factor 2- and germinal center kinase related-dependent pathway. J. Biol. Chem. 272: 32102-32107.
4. Anderson, D.M., et al. 1997. A homologue of the TNF receptor and its ligand enhance T cell growth and dendritic cell function. Nature 390: 175-179.
5. Darnay, B.G., et al. 1998. Characterization of the intracellular domain of receptor activator of NFκB (RANK). Interaction with tumor necrosis factor receptor-associated factors and activation of NFκB and c-Jun N-terminal kinase. J. Biol. Chem. 273: 20551-20555.
6. Wong, B.R., et al. 1998. The TRAF family of signal transducers mediates NFκB activation by the TRANCE receptor. J. Biol. Chem. 273: 28355-28359.

CHROMOSOMAL LOCATION

Genetic locus: Tnfrsf11a (mouse) mapping to 1 E2.1.

PRODUCT

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

APPLICATIONS

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

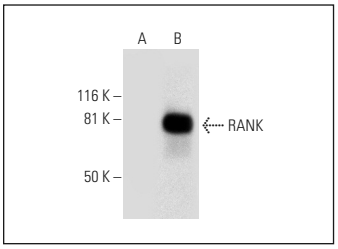
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RANK (B-8): sc-390655 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse RANK expression in RANK transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

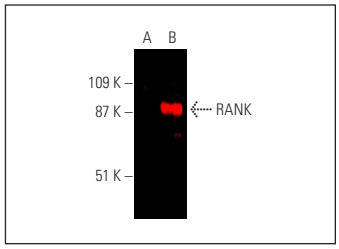
RECOMMENDED SUPPORT REAGENTS

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



RANK (B-8): sc-390655. Western blot analysis of RANK expression in non-transfected: sc-117752 (**A**) and mouse RANK transfected: sc-122962 (**B**) 293T whole cell lysates.



RANK (H-7): sc-374360. Near-infrared western blot analysis of RANK expression in non-transfected: sc-117752 (**A**) and mouse RANK transfected: sc-122962 (**B**) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

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.