

RANK (C-20): sc-7625

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 NF κ B and JNK pathways. RANK (receptor activator of NF κ B) is a member of the TNFR 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 TRAF 2, 5 and 6, and it is also necessary for stimulating NF κ B 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 κ B (NF κ B)-inducing kinase requirement for activation of activating protein 1 and NF κ B 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 NF κ B, 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.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF11A (human) mapping to 18q21.33.

SOURCE

RANK (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of RANK of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7625 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4 $^{\circ}$ 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.

APPLICATIONS

RANK (C-20) is recommended for detection of RANK 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

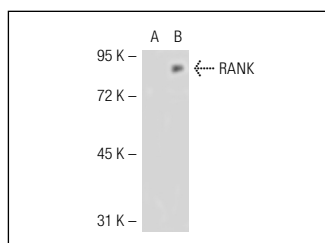
Suitable for use as control antibody for RANK siRNA (h): sc-42960, RANK shRNA Plasmid (h): sc-42960-SH and RANK shRNA (h) Lentiviral Particles: sc-42960-V.

Molecular Weight (predicted) of RANK: 66 kDa.

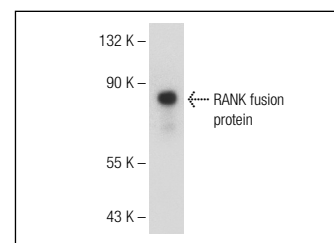
Molecular Weight (observed) of RANK: 82-90 kDa.

Positive Controls: RANK (m): 293T Lysate: sc-122962, SJRH30 cell lysate: sc-2287 or Hep G2 cell lysate: sc-2227.

DATA



RANK (C-20): sc-7625. Western blot analysis of RANK expression in non-transfected: sc-117752 (A) and mouse RANK transfected: sc-122962 (B) 293T whole cell lysates.



RANK (C-20): sc-7625. Western blot analysis of human recombinant RANK fusion protein.

SELECT PRODUCT CITATIONS

1. Lossdorfer, S., et al. 2002. Immunohistochemical localization of receptor activator of NF κ B (RANK) and its ligand (RANKL) in human deciduous teeth. *Calcif. Tissue Int.* 71: 45-52.
2. Kim, Y.D., et al. 2007. Effect of low-level laser treatment after installation of dental titanium implant-immunohistochemical study of RANKL, RANK, OPG: an experimental study in rats. *Lasers Surg. Med.* 39: 441-450.
3. de Bruijn, N.D., et al. 2007. A clinicopathological study of 52 feline epulides. *Vet. Pathol.* 44: 161-169.
4. Lossdörfer, S., et al. 2010. Anabolic effect of intermittent PTH(1-34) on the local microenvironment during the late phase of periodontal repair in a rat model of tooth root resorption. *Clin. Oral Investig.* 14: 89-98.



Try **RANK (H-7): sc-374360**, our highly recommended monoclonal alternative to RANK (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **RANK (H-7): sc-374360**.