

RANKL (4i167): sc-71955

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 TRAF2, 5 and 6, and it is also necessary for stimulating NF κ B activation. The ligand for this receptor, RANKL (also designated TRANCE, OPGL 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

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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.
5. Darnay, B.G., et al. 1998. Characterization of the intracellular domain of receptor activator of NF κ B (RANK). Interaction with tumor necrosis factor receptor-associated factors and activation of NF κ B 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 NF κ B activation by the TRANCE receptor. *J. Biol. Chem.* 273: 28355-28359.
7. Kim, N., et al. 2000. Diverse roles of the tumor necrosis factor family member TRANCE in skeletal physiology revealed by TRANCE deficiency and partial rescue by a lymphocyte-expressed TRANCE transgene. *Proc. Natl. Acad. Sci. USA* 97:10905-10910.

CHROMOSOMAL LOCATION

Genetic locus: TNFSF11 (human) mapping to 13q14.11.

SOURCE

RANKL (4i167) is a mouse monoclonal antibody raised against recombinant RANKL of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RANKL (4i167) is recommended for detection of RANKL of human origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RANKL siRNA (h): sc-29464, RANKL shRNA Plasmid (h): sc-29464-SH and RANKL shRNA (h) Lentiviral Particles: sc-29464-V.

Molecular Weight of RANKL full length: 35-40 kDa.

Molecular Weight of membrane bound RANKL: 35-40 kDa.

Molecular Weight of soluble RANKL: 20-30 kDa.

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.



See **RANKL (G-1): sc-377079** for RANKL antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.