SANTA CRUZ BIOTECHNOLOGY, INC.

RANKL (FL-317): sc-9073

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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 NFκB 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.

CHROMOSOMAL LOCATION

Genetic locus: TNFSF11 (human) mapping to 13q14.11; Tnfsf11 (mouse) mapping to 14 D3.

SOURCE

RANKL (FL-317) is a rabbit polyclonal antibody raised against amino acids 46-317 representing full length RANKL of human origin.

PRODUCT

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

APPLICATIONS

RANKL (FL-317) is recommended for detection of RANKL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RANKL (FL-317) is also recommended for detection of RANKL in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for RANKL siRNA (h): sc-29464, RANKL siRNA (m): sc-37270, RANKL shRNA Plasmid (h): sc-29464-SH, RANKL shRNA Plasmid (m): sc-37270-SH, RANKL shRNA (h) Lentiviral Particles: sc-29464-V and RANKL shRNA (m) Lentiviral Particles: sc-37270-V.

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

Molecular Weight of soluble RANKL: 20-30 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368 or RANKL (h): CHO Lysate: sc-110023.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

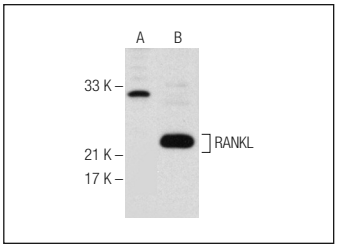
PROTOCOLS

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

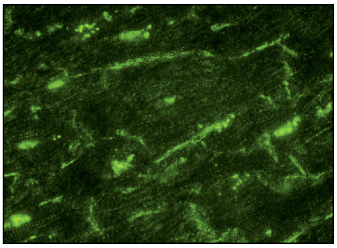
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



RANKL (FL-317): sc-9073. Western blot analysis of RANKL expression in non-transfected: sc-110760 (**A**) and human RANKL transfected: sc-110023 (**B**) 293 whole cell lysates.



RANKL (FL-317): sc-9073. Immunofluorescence staining of normal mouse heart frozen section showing membrane and cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Lubberts, E., et al. 2003. IL-17 promotes bone erosion in murine collagen-induced arthritis through loss of the receptor activator of NFκB ligand/osteoprotegerin balance. J. Immunol. 170: 2655-2662.
2. Rooney, T., et al. 2010. Synovial tissue rank ligand expression and radiographic progression in rheumatoid arthritis: observations from a proof-of-concept randomized clinical trial of cytokine blockade. Rheumatol. Int. 30: 1571-1580.
3. Wang, S., et al. 2010. Osteogenic differentiation of mouse mesenchymal progenitor cell, Kusa-A1 is promoted by mammalian transcriptional repressor Rbpj. Biochem. Biophys. Res. Commun. 400: 39-45.
4. Kanbe, K., et al. 2011. Decrease of CD68 and MMP-3 expression in synovium by treatment of adalimumab for rheumatoid arthritis. Int. J. Rheum. Dis. 14: 261-266.
5. Hie, M., et al. 2011. Zinc deficiency decreases osteoblasts and osteoclasts associated with the reduced expression of Runx2 and RANK. Bone 49: 1152-1159.
6. Wehrhan, F., et al. 2011. Msx-1 is suppressed in bisphosphonate-exposed jaw bone analysis of bone turnover-related cell signalling after bisphosphonate treatment. Oral Dis. 17: 433-442.
7. Xiao, G., et al. 2012. Critical role of filamin-binding LIM protein 1 (FBLP-1)/migfilin in regulation of bone remodeling. J. Biol. Chem. 287: 21450-21460.
8. Kanbe, K., et al. 2012. Osteoprotegerin expression in bone marrow by treatment with tocilizumab in rheumatoid arthritis. Rheumatol. Int. 32: 2669-2674.