SANTA CRUZ BIOTECHNOLOGY, INC.

RANKL (C-20): sc-7627

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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of 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.

Blocking peptide available for competition studies, sc-7627 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RANKL (C-20) 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 (C-20) is also recommended for detection of RANKL in additional species, including equine, 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.

RESEARCH USE

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

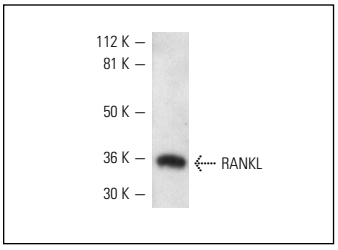
PROTOCOLS

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

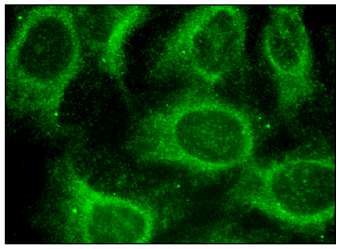
STORAGE

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

DATA



RANKL (C-20): sc-7627. Western blot analysis of mouse recombinant RANKL.



RANKL (C-20): sc-7627. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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2. Manabe, N., et al. 2001. Connection between B lymphocyte and osteoclast differentiation pathways. J. Immunol. 167: 2625-2631.
3. Pearse, R.N., et al. 2001. Multiple myeloma disrupts the TRANCE/osteoprotegerin cytokine axis to trigger bone destruction and promote tumor progression. Proc. Natl. Acad. Sci. USA 98: 11581-11586.
4. Luvizuto, E.R., et al. 2010. Histomorphometric analysis and immunolocalization of RANKL and OPG during the alveolar healing process in female ovariectomized rats treated with oestrogen or raloxifene. Arch. Oral Biol. 55: 52-59.
5. Booij-Vrieling, H.E., et al. 2010. Increased vitamin D-driven signalling and expression of the vitamin D receptor, MSX2, and RANKL in tooth resorption in cats. Eur. J. Oral Sci. 118: 39-46.
6. Zhang, H.W., et al. 2010. Defects in mesenchymal stem cell self-renewal and cell fate determination lead to an osteopenic phenotype in Bmi-1 null mice. J. Bone Miner. Res. 25: 640-652.
7. Taylor, R., et al. 2011. Ewing sarcoma cells express RANKL and support osteoclastogenesis. J. Pathol. 225: 195-202.
8. Duque, G., et al. 2011. Interferon-γ plays a role in bone formation *in vivo* and rescues osteoporosis in ovariectomized mice. J. Bone Miner. Res. 26: 1472-1483.