

RANKL (mBA-FL): sc-4618

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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CHROMOSOMAL LOCATION

Genetic locus: *Tnfsf11* (mouse) mapping to 14 D3.

SOURCE

RANKL (mBA-FL) is 19.4 kDa biologically active recombinant protein produced in *E. coli*, corresponding to the TNF homologous region (amino acids 143-316) of soluble RANKL of mouse origin.

PRODUCT

RANKL (mBA-FL) is purified from bacterial lysates (> 98% by SDS-PAGE and HPLC analyses); supplied as 10 μ g purified protein.

BIOLOGICAL ACTIVITY

RANKL (mBA-FL) is biologically active as determined by the ability of RANKL to induce osteoclast formation on RAW 264.7 cells using a concentration of 5-10 ng/ml.

RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C to 8° C for up to four weeks, and any frozen aliquot at -20° C to -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryopreservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

SELECT PRODUCT CITATIONS

- Balkan, W., Martinez, A.F., Fernandez, I., Rodriguez, M.A., Pang, M. and Troen, B.R. 2009. Identification of NFAT binding sites that mediate stimulation of cathepsin K promoter activity by RANK ligand. *Gene* 446: 90-98.
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- Chang, L.Y., Lai, C.H., Kuo, C.H., Chang, B.I., Wu, H.L. and Cheng, T.L. 2021. Recombinant thrombomodulin lectin-like domain attenuates porphyromonas gingivalis lipopolysaccharide-induced osteoclastogenesis and periodontal bone resorption. *J. Periodontol.* E-published.

STORAGE

Store desiccated at -20° C; stable for one year from the date of shipment.

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.