

BACKGROUND

Receptor Activator of NF- κ B Ligand (RANKL) is a cell-bound marker (CD254) related to the TNF family of proteins. RANKL plays a critical role in bone metabolism, particularly osteoclast differentiation. In addition, RANKL is expressed by some T cells is thought to promote dendritic cell maturation.

Recombinant soluble human RANKL is a non-glycosylated protein containing 176 amino acids and having a molecular mass of 20 kDa.

Alternative Names:

TNFSF11, TRANCE, OPGL, ODF

Amino Acid Sequence:

MEKAMVDGSW LDLAKRKLE AQPFAHLTIN ATDIPSGSHK
VSLSSWYHDR GWAKISNMTF SNGKLIVNQD GFYLYLANIC
FRHHETSGDL ATEYLQLMVY VTKTSIKIPS SHTLMKGGST
KYWSGNSEFH FYSINVGGFF KLRSGEEISI EVSNPSLLDP
DQDATYFGAF KVRDID

TECHNICAL INFORMATION

Source: *E.coli*

Physical Appearance:

Sterile Filtered white lyophilized (freeze-dried) powder.

Formulation:

Recombinant human soluble RANKL is lyophilized from a concentrated (1mg/ml) solution containing 10mM Na₂PO₄, pH 8.0.

Stability:

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

Reconstitution:

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

Protein Content and Purity determined by:

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

Endotoxin Level:

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

Biological Activity:

The activity is determined by its ability to induce osteoclast formation in RAW264.7 cells and by a dose-dependent stimulation of IL-8 production in human PBMC and is typically 5.0-10.0 ng/mL.

Products are for research use only. They are not intended for human, animal, or diagnostic applications.

