



# Recombinant Human sRANK Ligand

20210125BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>100-156</b>
Size:	10 µg
Lot. No.:	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	8600
<b>Synonyms:</b>	soluble Receptor Activator of NF-κB Ligand, TNFSF11, TRANCE (TNF-Related Activation-induced Cytokine), OPG, ODF (Osteoclast Differentiation Factor), CD254

RANKL and RANK are members of the TNF superfamily of ligands and receptors that play an important role in the regulation of specific immunity and bone turnover. RANK (receptor) was originally identified as a dendritic cell-membrane protein, which, by interacting with RANKL, augments the ability of dendritic cells. These dendritic cells then stimulate naïve T-cell proliferation in a mixed lymphocyte reaction, promote the survival of RANK + T-cells, and regulate T-cell-dependent immune response. RANKL, which is expressed in a variety of cells, including osteoblasts, fibroblasts, activated T-cells and bone marrow stromal cells, is also capable of interacting with a decoy receptor called OPG. Binding of soluble OPG to sRANKL inhibits osteoclastogenesis by interrupting the signaling between stromal cells and osteoclastic progenitor cells, thereby leading to excess accumulation of bone and cartilage. Human RANKL is reactive on murine cells. CHO cell-derived Recombinant Human sRANK Ligand is a 22.1 kDa polypeptide comprised of the TNF-homologous region of RANKL and a N-terminal His-tag.

### Sequence

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HHHHHHHPS PGGSGGSQHI RAEKAMVDGS WLDLAKRSKL
EAQFFAHLTI NATDIPSGSH KVSLSWYHD RGWGKISNMT
FSNGKLIVNQ DGFYLYANI CFRHETS GD LATEYLQLMV
YVTKTSIKIP SSHTLMKGS TKYWSGNSEF HFYSINVGGF
FKLRSGEIS IEVSNPSLLD PDQDATYFGA FKVRDID

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### Database References

<b>Protein RefSeq:</b>	NP_003692.1
<b>Uniprot ID:</b>	O14788
<b>mRNA RefSeq:</b>	NM_003701.3

## Product Specifications

<b>Expressed in</b>	CHO cells
<b>Purity</b>	> 98% by SDS-PAGE & HPLC analyses
<b>Endotoxin level</b>	< 0.1 ng/µg of protein (<1EU/µg).
<b>Formulation</b>	Lyophilized (10mM Sodium Phosphate, pH 7.8 + 150mM NaCl)
<b>Length (aa):</b>	197
<b>MW:</b>	22.1 kDa (reducing conditions)

**Stability:** The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

**Reconstitution:** Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.



**AVOID REPEATED FREEZE AND THAW CYCLES!**

**Biological Activity:** Determined by its ability to induce NF-κB in RAW264.7 cells in the absence of any cross-linking.