



# Recombinant Human RANK Receptor, soluble

20200812BB



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

<b>Cat.-no.:</b>	<b>100-117</b>
Size:	100 µg
Lot. No.:	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	8792
<b>Synonyms:</b>	tumor necrosis factor receptor superfamily, member 11a, NFKappa-B activator; FEO; OFE; ODFR; OST5; PDB2; RANK; CD265; OPTB7; TRANCER; LOH18CR1

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 to stimulate naïve T cell proliferation and to promote the survival of RANK + T cells. RANK is also expressed in a variety of tissues including skeletal muscle, thymus, liver, colon, small intestine and adrenal gland. The RANK/RANKL interaction is important in the regulation of osteoclastogenesis and in dendritic-cell-mediated T cell immune responses. Impairments in RANK signaling have been implicated in the induction of expansile osteolysis and Paget disease of bone (PDB2). Recombinant human sRANK receptor is a 19.3 kDa polypeptide containing the TNFR homologous cysteine rich portion of the extracellular domain of RANK receptor (175 amino acid residues).

### Sequence

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MQIAPPCTSE KHYEHLGRCC NKCEPGKYMS SKCTTTSDSV
CLPCGPDEYL DSWNEEDKCL LHKVCDTGKA LVAVVAGNST
TPRRCACTAG YHWSQDCECC RRNTECAPGL GAQHPLQLNK
DTVCKPCLAG YFSDAFSSTD KCRPWTNCTF LGKRVEHHGT
EKSDAVCSSS LPARK
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### Database References

<b>Protein RefSeq:</b>	NP_003830.1
<b>Uniprot ID:</b>	Q9Y6Q6
<b>mRNA RefSeq:</b>	NM_003839.3

## Product Specifications

<b>Expressed in</b>	E. coli
<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 7.2)
<b>Length (aa):</b>	175
<b>MW:</b>	19.3 kDa

**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 after reconstitution.* 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: #1** Determined by its ability to inhibit sRANKL induced NFkappaB in RAW264.7 cells in the absence of any cross-linking. The expected ED<sub>50</sub> for this effect in the presence of 15ng/ml of recombinant sRANKL, is 30-50 ng/ml. **#2** Determined by its ability to suppress the production of INF-g from human PBMCs.