Recombinant Rat RANKL, soluble

20160518BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**R20-020**
Size:	10 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	*117516*
Synonyms:	soluble Receptor Activator of NFkB Ligand, TNFSF11, TRANCE (TNF-related activation-induced cytokine), OPGL, ODF (Osteoclast differentiation factor),

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 in a mixed lymphocyte reaction, to promote the survival of RANK + T cells, and to 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. Recombinant rat sRANKL is a 19.4 kDa polypeptide comprising the TNF homologous region of RANKL (174 amino acid residues).

Sequence

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PAMMEGSWLD VARRGKPEAQ PFAHLTINAA DIPSGSHKVS
LSSWYHDRGW AKISNMTLSN GKLRVNQDGF YYLYANICFR
HHETSGSVPA DYLQLMVYVV KTSIKIPSSH NLMKGGSTKN
WSGNSEFHFY SINVGGFFKL RAGEEISVQV SNPSLLDPDQ
DATYFGAFKV QDID
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Database References

Protein RefSeq:	NP_476490.1
Uniprot ID:	Q9ESE2
mRNA RefSeq:	NM_057149.1

Product Specifications

Expressed in	E. coli
Purity	> 98% by SDS-PAGE & HPLC analyses
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	lyophilized
Length (aa):	174
MW:	19.4 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/m. *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 NFkappaB in RAW264.7 cells in the absence of any cross-linking. The expected ED50 for this effect is 10.0-25.0 ng/ml.