

## Human RANKL soluble

### Human RANK Ligand soluble, recombinant

Synonyms: soluble Receptor Activator of NF $\kappa$ B Ligand, TNFSF11, TRANCE (TNF-related activation-induced cytokine), OPG, ODF (Osteoclast differentiation factor)

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date*
10 $\mu$ g	W 1855950010	3503101420	September 2013

### Description

Recombinant human sRANKL is a 20.0 kDa polypeptide comprising the TNF homologous region of RANKL (176 amino acid residues). 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 signalling between stromal cells and osteoclastic progenitor cells, thereby leading to excess accumulation of bone and cartilage.

- **Biological activity** See below
- **Source** *E. coli*
- **Purity**  $\geq 98\%$  (SDS-PAGE, HPLC)
- **Endotoxin level**  $\leq 0.1\text{ ng}/\mu\text{g}$  ( $\leq 1\text{ EU}/\mu\text{g}$ )
- **Stabilizer** None
- **Buffer** Tris (5mM; pH7.6) + NaCl (75mM)
- **Physical state** Sterile filtered, lyophilized

### Biological activity

The ED<sub>50</sub> of  $\leq 10.0\text{-}25.0\text{ ng/ml}$  was determined by its ability to induce NF $\kappa$ B in RAW264.7 cells in the absence of any cross linking.

### Reconstitution

We recommend a quick spin followed by reconstitution 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.

### Stability

The lyophilized protein is stable at room temperature for up 1 month. Reconstituted human sRANKL should be stored in working aliquots with a carrier protein for at least 3 months at -20°C to -80°C. **Please avoid repeated freeze thaw cycles.**

### Usage

FOR RESEARCH USE ONLY

NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES

\*For lyophilized product if stored as indicated. Please contact our technical support if the product has expired.