

# Active Recombinant Human Tumor Necrosis Factor (ligand) Superfamily, Member 11

Cat. No. TNFSF11-4744H Lot. No. (See product label)

## SPECIFICATION

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|-------------------------|---|
| <b>Product Overview</b> | Recombinant Human soluble RANKL produced in E.Coli is a single, non-glycosylated polypeptide chain containing 176 amino acids and having a molecular mass of 20006 Dalton.  |
| <b>Species</b>          | Human   |
| <b>Source</b>           | E.coli  |
| <b>Description</b>      | Receptor activator of nuclear factor kappa-B ligand (RANKL), also known as tumor necrosis factor ligand superfamily member 11 (TNFSF11), TNF-related activation-induced cytokine (TRANCE), osteoprotegerin ligand (OPGL), and osteoclast differentiation factor (ODF), is a protein that in humans is encoded by the TNFSF11 gene. RANKL is important in bone metabolism. |
| <b>Form</b>             | Recombinant Soluble RANK ligand was lyophilized from a concentrated (1mg/ml) solution containing 10mM NaP, pH 8.0.  |
| <b>Purity</b>           | Purity Greater than 98% as determined by: Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.  |
| <b>Bio-activity</b>     | RANK ligand is fully biologically active when compared to standard. The activity is determined by its ability to induce osteoclast formation in RAW264.7 cells using a conc. of 5.0-10.0 ng/ml and by dose dependant stimulation of IL-8 production in human PBMC.  |

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| <b>Physical Appearance</b>                      | Sterile Filtered white lyophilized (freeze-dried) powder.  |
| <b>Solubility</b>                               | 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 $\mu$ s/ml, which can be further diluted into other aqueous solutions. |
| <b>Purity Greater than 98% as determined by</b> | Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.   |
| <b>Protein Content determined by</b>            | UV spectroscopy at 280 nm. Analysis by RP-HPLC calibrated against a known standard. Quantitation on SDS-PAGE against a known standard.   |
| <b>Endotoxin Level</b>                          | Endotoxin level as measured by LAL is <0.01ng/ug or <0.1EU/ug.   |
| <b>Amino acid sequence</b>                      | MEKAMVDGSW LDLAKRSKLE AQPFAHLTIN ATDIPSGSHK VSLSSWYHDR<br>GWAKISNMTF SNGKLIVNQD GFYYLYANIC FRHHETSGDL ATEYLQLMVY<br>VTKTSIKIPS SHTLMKGGST KYWSGNSEFH FYSINVGGFF KLRSGEEISI<br>EVSNPSSLDP DQDATYFGAF KVRDID   |
| <b>Storage</b>                                  | Lyophilized product is very stable at -20 degrees. Reconstituted material should be aliquoted and frozen at -20. It is recommended to add a carrier protein (0.1% HSA or BSA) for long term storage.   |

## GENE INFORMATION

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|------------------------|--|
| <b>Gene Name</b>       | TNFSF11 tumor necrosis factor (ligand) superfamily, member 11 [ Homo sapiens ] |
| <b>Official Symbol</b> | TNFSF11  |

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| <b>Synonyms</b>            | TNFSF11; tumor necrosis factor (ligand) superfamily, member 11; ODF; OPGL; sOdf; CD254; OPTB2; RANKL; TRANCE; hRANKL2; tumor necrosis factor ligand superfamily, member 11; OTTHUMP00000178585; osteoprotegerin ligand; osteoclast differentiation factor; TNF-related activation-induced cytokine; receptor activator of nuclear factor kappa B ligand; Tumor necrosis factor ligand superfamily member 11, membrane form; Tumor necrosis factor ligand superfamily member 11, soluble form; CD254 antigen; Osteoprotegerin ligand |
| <b>Gene ID</b>             | <a href="#">8600</a>  |
| <b>mRNA Refseq</b>         | <a href="#">NM_003701</a>   |
| <b>Protein Refseq</b>      | <a href="#">NP_003692</a>   |
| <b>MIM</b>                 | <a href="#">602642</a>  |
| <b>UniProt ID</b>          | <a href="#">O14788</a>  |
| <b>Chromosome Location</b> | 13q14   |
| <b>Pathway</b>             | Cytokine-cytokine receptor interaction; IL6-mediated signaling events; Osteoblast Signaling; Osteoclast differentiation; Rheumatoid arthritis   |
| <b>Function</b>            | cytokine activity; protein binding; receptor activity; tumor necrosis factor receptor binding   |

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