



Recombinant Protein Technical Manual

**Recombinant Human RANKL/TNFSF11 Protein
(Active)**
RPES0269

Product Data:

Product SKU: RPES0269

Size: 5µg

Species: Human

Expression host: HEK293 Cells

Uniprot: O14788-2

Protein Information:

Molecular Mass: 20.5 kDa

AP Molecular Mass: 27 kDa

Tag:

Bio-activity: 1. Immobilized human TNFSF11 at 10 µg/ml (100 µl/well) can bind biotinylated human TNFRSF11B-His, The EC50 of biotinylated human TNFRSF11B-His is 5.73.4 ng/ml. 2. The bioactivity of hRANKL was determined by measuring the ability of hRANKL to induce TRAP activity in Raw 264.7 cells. The ED50 for this effect is typically 1.5-7.5 ng/mL.

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application: Functional ELISA

Synonyms: CD254; ODF; OPGL; RANKL; TNFSF11; CD254; Osteoclast differentiation factor; Receptor activator of nuclear factor kappa-B ligand; tumor necrosis factor ligand superfamily member 11; hRANKL2; OPTB2; RANKL; sOdf

Immunogen Information:

Sequence: Gly 63-Asp 244

Background:

Tumor necrosis factor ligand superfamily member 11, also known as Receptor activator of nuclear factor kappa-B ligand, Osteoprotegerin ligand, TNFSF11, RANKL, TRANCE, OPGL and CD254, is a single-pass type II membrane protein which belongs to the tumor necrosis factor family. The receptor activator of nuclear factor-kappaB ligand (RANKL), its cognate receptor RANK, and its natural decoy receptor osteoprotegerin have been identified as the final effector molecules of osteoclastic bone resorption. RANK and RANKL are key regulators of bone remodeling and regulate T cell/dendritic cell communications, and lymph node formation. Moreover, RANKL and RANK are expressed in mammary gland epithelial cells and control the development of a lactating mammary gland during pregnancy. Genetically, RANKL and RANK are essential for the development and activation of osteoclasts and bone loss in response to virtually all triggers tested. Inhibition of RANKL function via the natural decoy receptor osteoprotegerin (OPG, TNFRSF11B) prevents bone loss in postmenopausal osteoporosis and cancer metastases. Importantly, RANKL appears to be the pathogenetic principle that causes bone and cartilage destruction in arthritis. RANK-RANKL signaling not only activates a variety of downstream signaling pathways required for osteoclast development, but crosstalk with other signaling pathways also fine-tunes bone homeostasis both in normal physiology and disease. In addition, RANKL and RANK have essential roles in lymph node formation, establishment of the thymic microenvironment, and development of a lactating mammary gland during pregnancy. Immune Checkpoint Immunotherapy Cancer Immunotherapy Targeted Therapy