

Bioactive

HuPro®

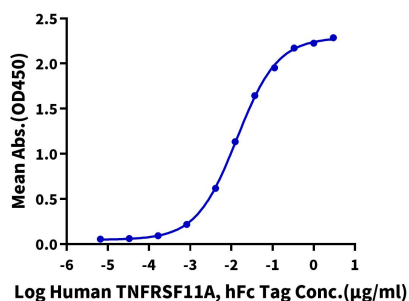
TNFSF11 (Human) Recombinant Protein

Catalog # P9871

Size 100 ug

Applications

Human RANKL, No Tag ELISA
0.2µg Human RANKL, No Tag Per Well

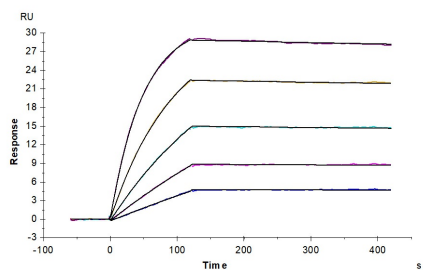


Enzyme-linked Immunoabsorbent Assay

Immobilized Human RANKL, No Tag at 2 ug/mL (100 uL/well) on the plate. Dose response curve for Human TNFRSF11A, hFc Tag with the EC₅₀ of 13.6 ng/mL determined by ELISA (QC Test).

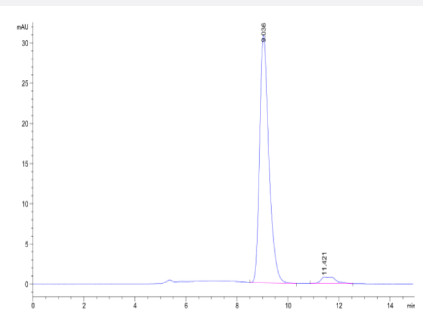
Surface Plasmon Resonance

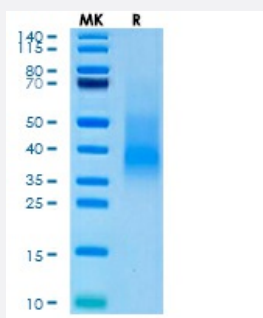
Human TNFRSF11B, His Tag captured on CM5 Chip via Anti-His Antibody can bind Human RANKL, No Tag with an affinity constant of 0.030 nM as determined in SPR assay (Biacore T200).



SEC-HPLC

The purity of Human RANKL is greater than 90% as determined by SEC-HPLC.





Tris-Bis PAGE

Human RANKL on Tris-Bis PAGE under reduced condition. The purity is greater than 90%.

Specification

Product Description	Human TNFSF11 (O14788-2, Gly63-Asp244) partial recombinant protein expressed in HEK293 cells.
Sequence	Gly63-Asp244
Host	Human
Theoretical MW (kDa)	20.5
Form	Lyophilized
Preparation Method	Mammalian cell (HEK293) expression system
Purity	> 90% as determined by Tris-Bis PAGE; > 90% as determined by HPLC
Endotoxin Level	< 1 EU per 1 ug of protein (determined by LAL method)
Activity	The EC ₅₀ was 13.6 ng/mL, measured by ELISA at 2 ug/mL. The affinity constant of 0.030 nM as determined in SPR assay (Biacore T200).
Quality Control Testing	SEC-HPLC and Tris-Bis PAGE SEC-HPLC The purity of Human RANKL is greater than 90% as determined by SEC-HPLC. Tris-Bis PAGE Human RANKL on Tris-Bis PAGE under reduced condition. The purity is greater than 90%.
Recommend Usage	Biological Activity ELISA SDS-PAGE SPR The optimal working dilution should be determined by the end user.
Storage Buffer	Lyophilized from sterile distilled Water is > 100 ug/mL
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Result of bioactivity analysis

Applications

- Enzyme-linked Immunoabsorbent Assay

Immobilized Human RANKL, No Tag at 2 ug/mL (100 uL/well) on the plate. Dose response curve for Human TNFRSF11A, hFc Tag with the EC50 of 13.6 ng/mL determined by ELISA (QC Test).

- Functional Study

- SDS-PAGE

- Surface Plasmon Resonance

Human TNFRSF11B, His Tag captured on CM5 Chip via Anti-His Antibody can bind Human RANKL, No Tag with an affinity constant of 0.030 nM as determined in SPR assay (Biacore T200).

Gene Info — TNFSF11

Entrez GeneID [8600](#)

Protein Accession# [O14788-2](#)

Gene Name TNFSF11

Gene Alias CD254, ODF, OPGL, OPTB2, RANKL, TRANCE, hRANKL2, sOdf

Gene Description tumor necrosis factor (ligand) superfamily, member 11

Omim ID [259710 602642](#)

Gene Ontology [Hyperlink](#)

Gene Summary This gene encodes a member of the tumor necrosis factor (TNF) cytokine family which is a ligand for osteoprotegerin and functions as a key factor for osteoclast differentiation and activation. This protein was shown to be a dendritic cell survival factor and is involved in the regulation of T cell-dependent immune response. T cell activation was reported to induce expression of this gene and lead to an increase of osteoclastogenesis and bone loss. This protein was shown to activate antiapoptotic kinase AKT/PKB through a signaling complex involving SRC kinase and tumor necrosis factor receptor-associated factor (TRAF) 6, which indicated this protein may have a role in the regulation of cell apoptosis. Targeted disruption of the related gene in mice led to severe osteopetrosis and a lack of osteoclasts. The deficient mice exhibited defects in early differentiation of T and B lymphocytes, and failed to form lobulo-alveolar mammary structures during pregnancy. Two alternatively spliced transcript variants have been found. [provided by RefSeq]

Other Designations OTTHUMP00000178585|TNF-related activation-induced cytokine|osteoclast differentiation factor|osteoprotegerin ligand|receptor activator of nuclear factor kappa B ligand|tumor necrosis factor ligand superfamily, member 11

Pathway

- [Cytokine-cytokine receptor interaction](#)

Disease

- [Acute Disease](#)
- [Alveolar Bone Loss](#)
- [Alzheimer disease](#)
- [Arthritis](#)
- [Bone Diseases](#)
- [Bone Resorption](#)
- [Calcinosis](#)
- [Cardiovascular Diseases](#)
- [Diabetes Complications](#)
- [Diabetes Mellitus](#)
- [Disease Progression](#)
- [Edema](#)
- [Fractures](#)
- [Genetic Predisposition to Disease](#)
- [Lupus Erythematosus](#)
- [Metabolic Syndrome X](#)
- [Neoplasms](#)
- [Obesity](#)
- [Osteoporosis](#)
- [Periodontitis](#)
- [Prosthesis Failure](#)

- [Scoliosis](#)
- [Spinal Fractures](#)
- [Tobacco Use Disorder](#)