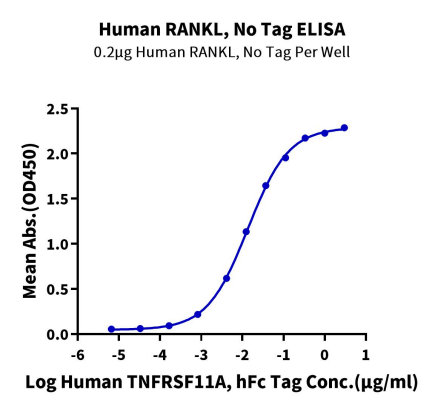
Bioactive | CellTx™ | HuPro®

TNFSF11 (Human) Recombinant Protein

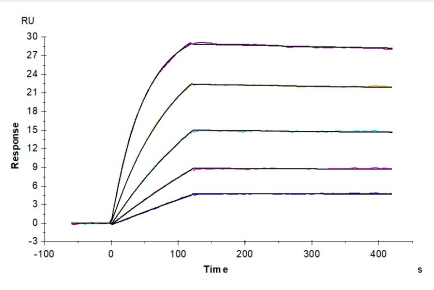
Catalog # P9871 Size 100 ug

Applications



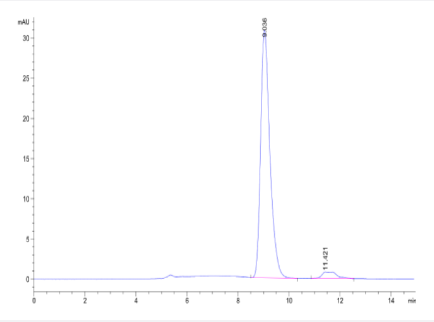
Enzyme-linked Immunoabsorbent Assay

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).



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.

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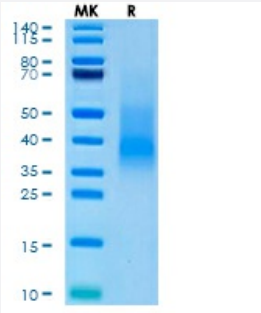

Tris-Bis PAGE

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, messured 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

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Applications

- Functional Study
- 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).
- 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 dentritic cell survival factor and is involved in the regulation of T cell-de pendent immune response. T cell activation was reported to induce expression of this gene and le ad to an increase of osteoclastogenesis and bone loss. This protein was shown to activate antiap optotic kinase AKT/PKB through a signaling complex involving SRC kinase and tumor necrosis fa ctor receptor-associated factor (TRAF) 6, which indicated this protein may have a role in the regul ation of cell apoptosis. Targeted disruption of the related gene in mice led to severe osteopetrosi s 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 altern atively 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 li gand superfamily, member 11

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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

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- Scoliosis
- Spinal Fractures
- Tobacco Use Disorder

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