



Synonym

RANKL,CD254,TRANCE,OPGL,ODF

Source

Human TNFSF11 Protein, His Tag(RAL-H5240) is expressed from human 293 cells (HEK293). It contains AA Gly 64 - Asp 245 (Accession # [AAC51762.1](#)).

Predicted N-terminus: His

Molecular Characterization

Poly-his TNFSF11(Gly 64 - Asp 245)
AAC51762.1

This protein carries a polyhistidine tag at the N-terminus.

The protein has a calculated MW of 22.4 kDa. The protein migrates as 28-35 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

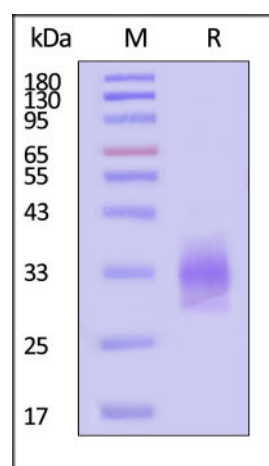
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

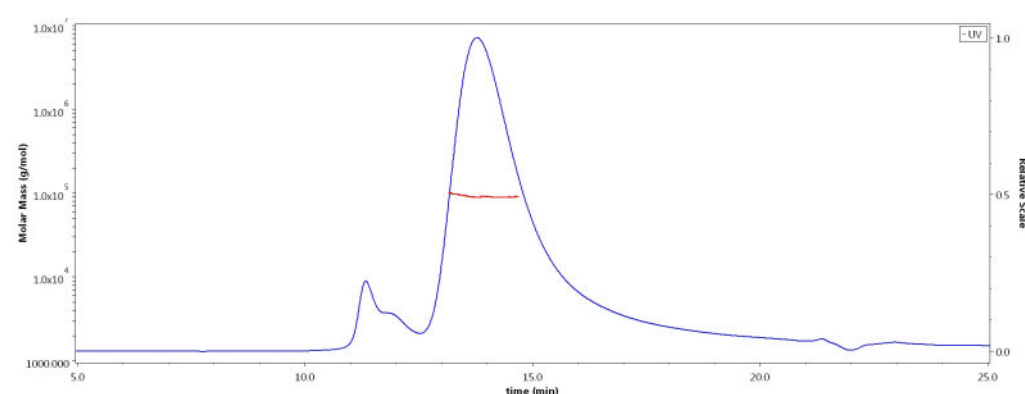
SDS-PAGE



Human TNFSF11 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA

SEC-MALS

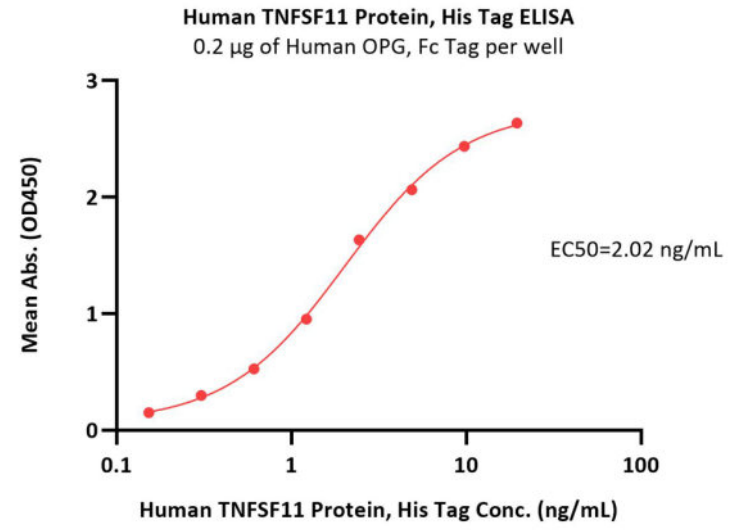
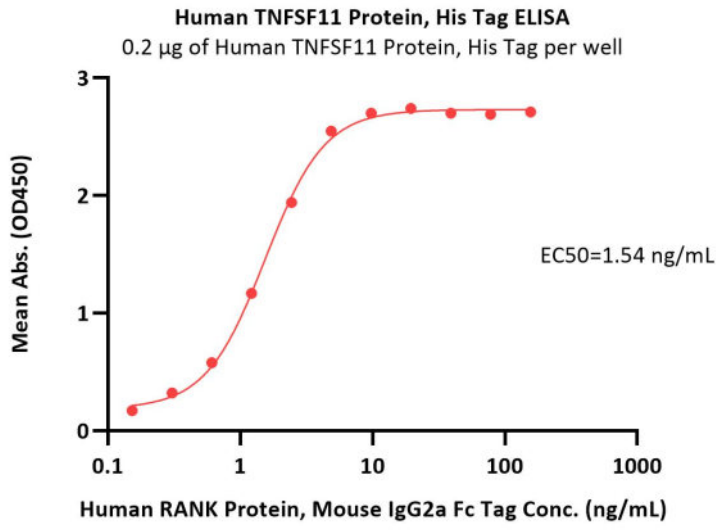


The purity of Human TNFSF11 Protein, His Tag (Cat. No. RAL-H5240) is more than 85% and the molecular weight of this protein is around 80-100 kDa verified by SEC-MALS.

[Report](#)

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and more!

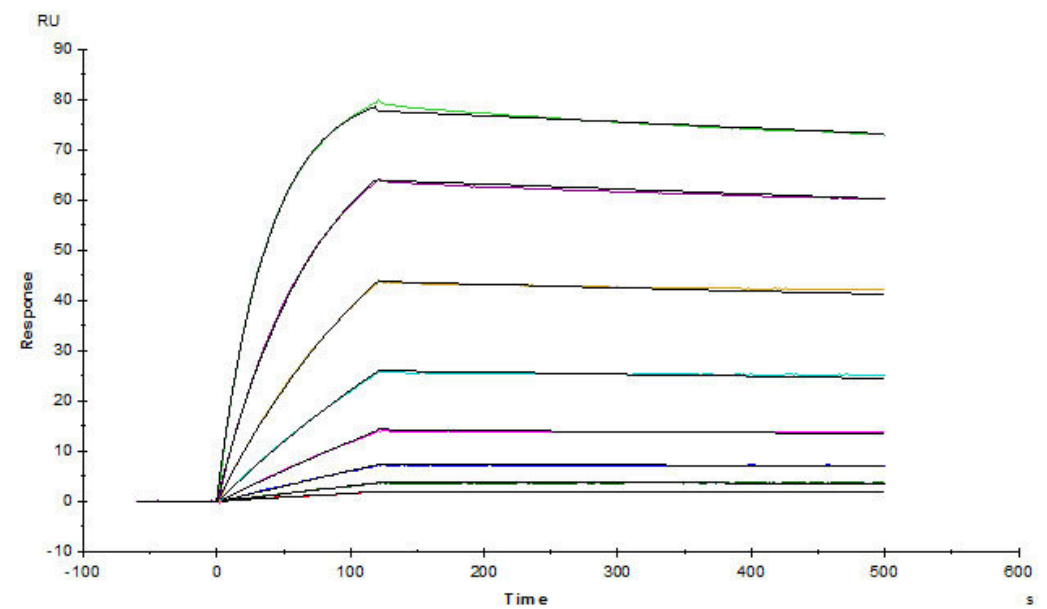
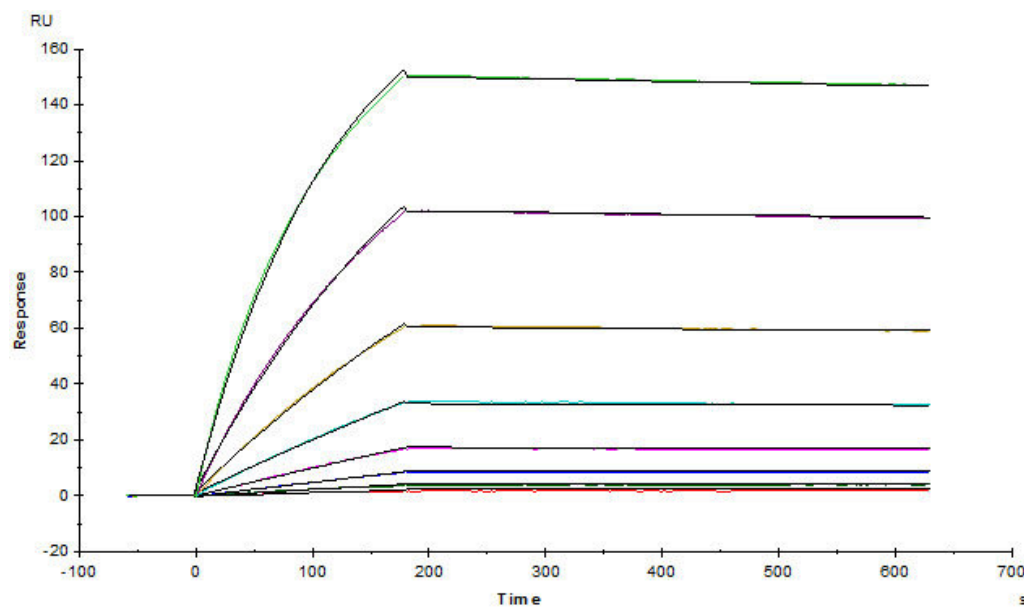




Immobilized Human TNFSF11 Protein, His Tag (Cat. No. RAL-H5240) at 2 µg/mL (100 µL/well) can bind Human RANK Protein, Mouse IgG2a Fc Tag (Cat. No. RAK-H5251) with a linear range of 0.2-5 ng/mL (QC tested).

Immobilized Human OPG, Fc Tag (Cat. No. TNB-H5259) at 2 µg/mL (100 µL/well) can bind Human TNFSF11 Protein, His Tag (Cat. No. RAL-H5240) with a linear range of 0.2-2 ng/mL (Routinely tested).

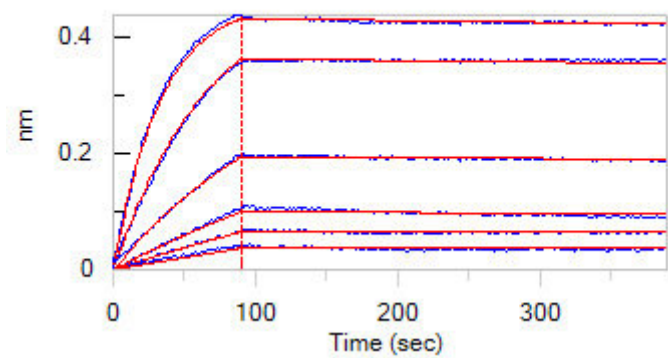
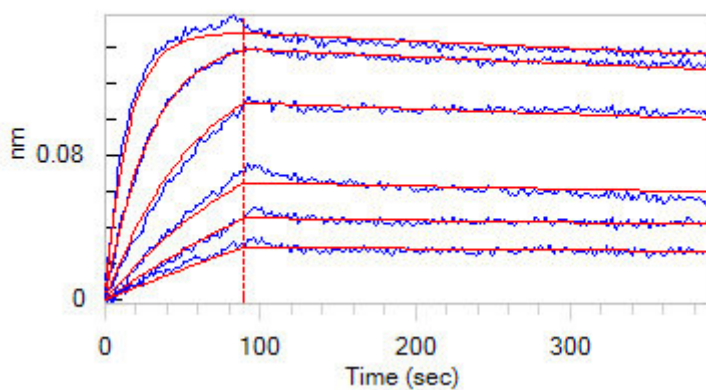
Bioactivity-SPR



Anti-TNFSF11 (human IgG1) captured on CM5 chip via Anti-human IgG Fc antibodies surface can bind Human TNFSF11 Protein, His Tag (Cat. No. RAL-H5240) with an affinity constant of 0.274 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

Captured Human RANK Protein, Mouse IgG2a Fc Tag (Cat. No. RAK-H5251) on CM5 chip via Anti-Mouse antibodies surface can bind Human TNFSF11 Protein, His Tag (Cat. No. RAL-H5240) with an affinity constant of 0.309 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI



Loaded Human RANK Protein, Mouse IgG2a Fc Tag (Cat. No. RAK-H5251) on AMC Biosensor, can bind Human TNFSF11 Protein, His Tag (Cat. No. RAL-H5240) with an affinity constant of 0.309 nM as determined in a BLI assay (Biacore T200) (Routinely tested).

Loaded Anti-TNFSF11 MAb (human IgG1) on AHC Biosensor, can bind Human TNFSF11 Protein, His Tag (Cat. No. RAL-H5240) with an affinity constant of 0.274 nM as determined in a BLI assay (Biacore T200) (Routinely tested).

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RAL-H5240) with an affinity constant of 0.409 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

constant of 0.239 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

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 known as a type II membrane protein and is a member of the tumor necrosis factor (TNF) superfamily. RANKL, through its ability to stimulate osteoclast formation and activity, is a critical mediator of bone resorption and overall bone density. Some findings also suggest some cancer cells, particularly prostate cancer cells, can activate an increase in bone remodeling and ultimately increase overall bone production.[17] This increase in bone remodeling and bone production increases the overall growth of bone metastasizes. The overall control of bone remodeling is regulated by the binding of RANKL with its receptor or its decoy receptor, respectively, RANK and OPG.

Clinical and Translational Updates

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