



### Synonym

RANKL,CD254,TRANCE,OPGL,ODF

### Source

Human TNFSF11, Fc Tag(RAL-H5265) is expressed from human 293 cells (HEK293). It contains AA Gly 64 - Asp 245 (Accession # [AAC51762.1](#)).

Predicted N-terminus: Pro

### Molecular Characterization

Fc(Pro 100 - Lys 330) P01857	TNFSF11(Gly 64 - Asp 245) AAC51762.1
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This protein carries a human IgG1 Fc tag at the N-terminus.

The protein has a calculated MW of 46.9 kDa. The protein migrates as 50-60 kDa 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

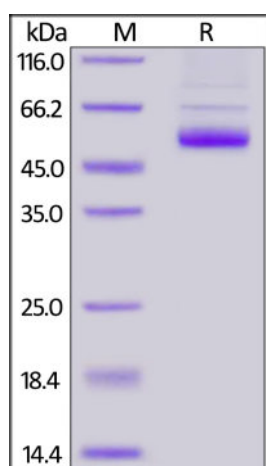
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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

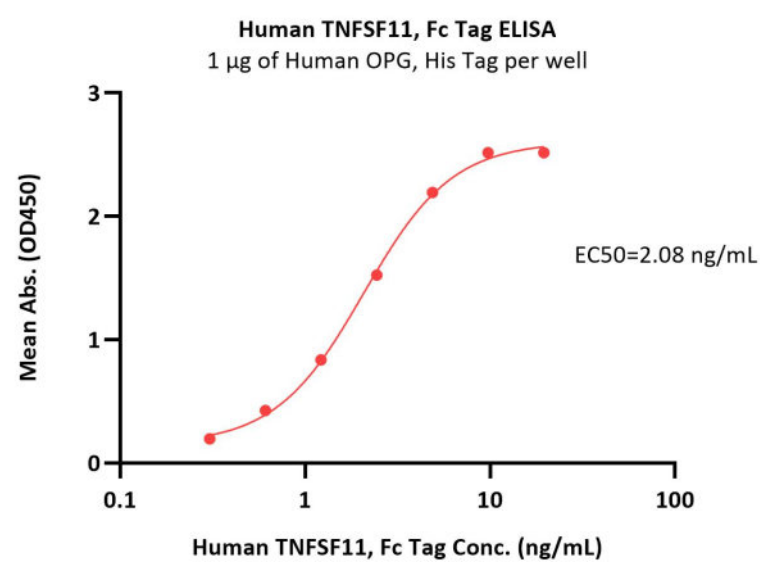
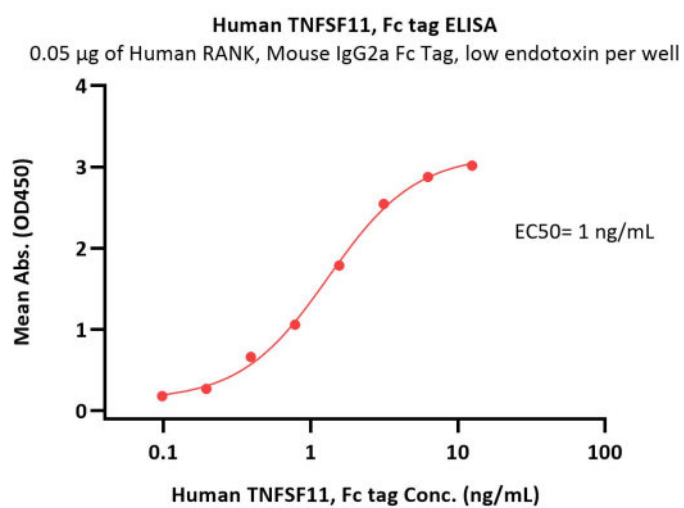


Human TNFSF11, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

### Bioactivity-ELISA

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and more!

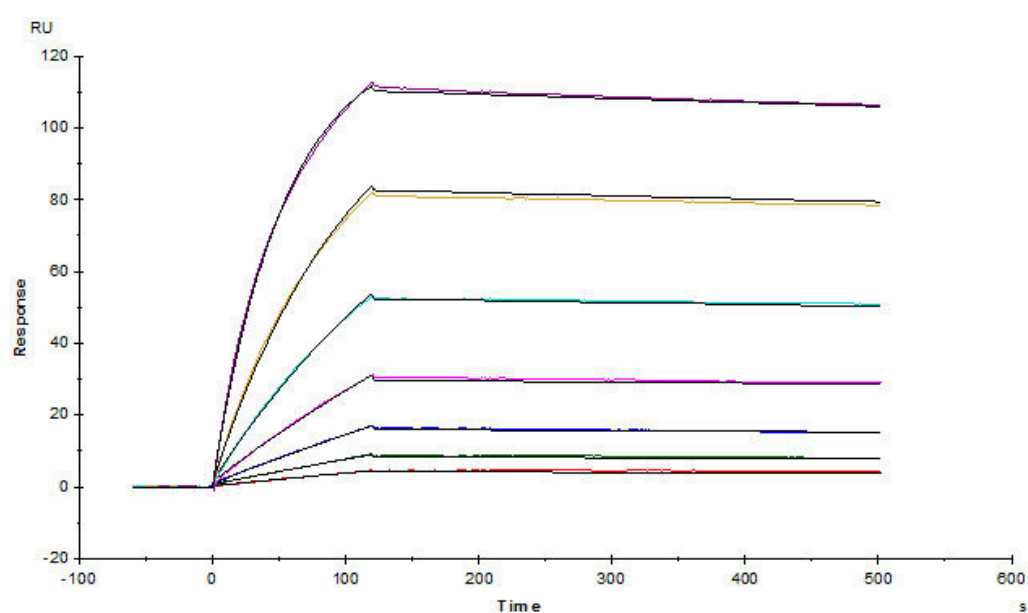




Immobilized Human RANK, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. RAK-H5251) at 0.5 µg/mL (100 µL/well) can bind Human TNFSF11, Fc Tag (Cat. No. RAL-H5265) with a linear range of 0.1-3 ng/mL (QC tested).

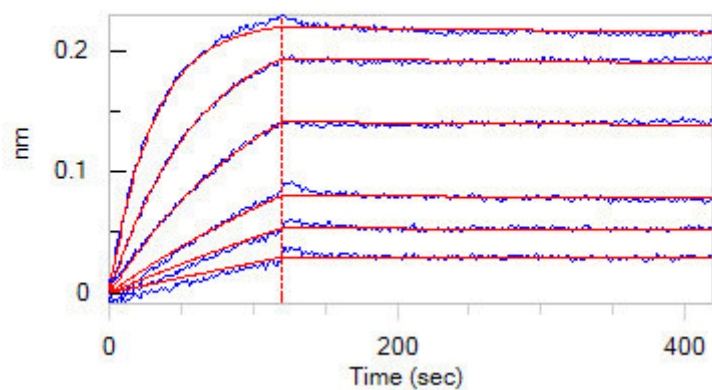
Immobilized Human OPG, His Tag (Cat. No. TNB-H5220) at 10 µg/mL (100 µL/well) can bind Human TNFSF11, Fc Tag (Cat. No. RAL-H5265) with a linear range of 0.3-2 ng/mL (Routinely tested).

**Bioactivity-SPR**



Captured Human RANK, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. RAK-H5251) on CM5 chip via Anti-Mouse antibodies surface can bind Human TNFSF11, Fc Tag (Cat. No. RAL-H5265) with an affinity constant of 0.574 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

**Bioactivity-BLI**



Loaded Human RANK, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. RAK-H5251) on AMC Biosensor, can bind Human TNFSF11, Fc Tag (Cat. No.

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RAL-H5265) with an affinity constant of 0.205 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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