Human TNFSF11 / RANKL / CD254 Protein, premium grade

Catalog # RAL-H5217

Synonym

RANKL,CD254,TRANCE,OPGL,ODF

Source

Human TNFSF11 Protein, premium grade(RAL-H5217) is expressed from human 293 cells (HEK293). It contains AA Gly 64 - Asp 245 (Accession # AAC51762.1).
Predicted N-terminus: Gly 64
It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

TNFSF11(Gly 64 - Asp 245)
AAC51762.1

This protein carries no "tag".

The protein has a calculated MW of 20.5 kDa. The protein migrates as 28-33 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.1 EU per μg by the LAL method.

Sterility

Negative

Purity

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

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

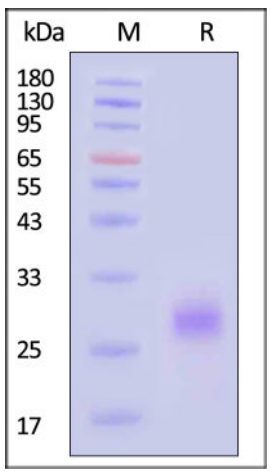
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

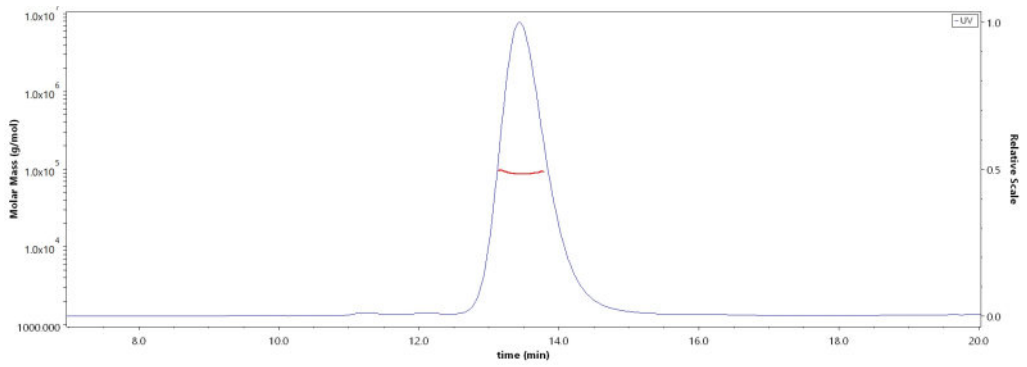
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



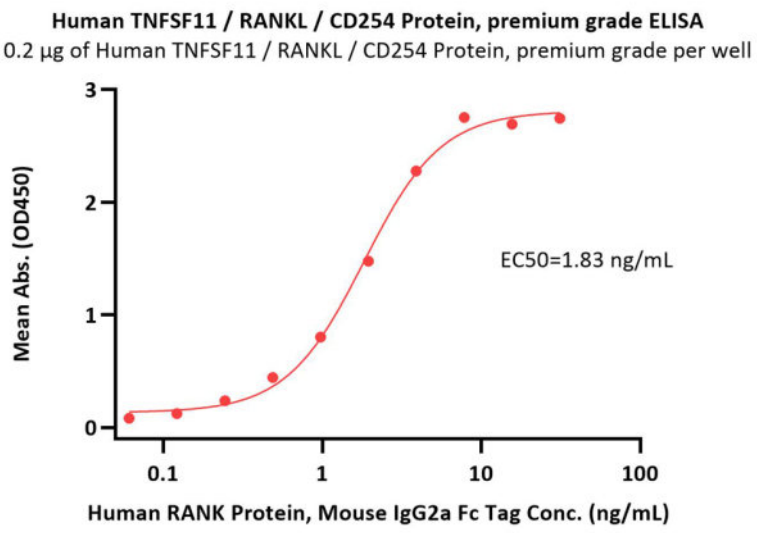
Human TNFSF11 Protein, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

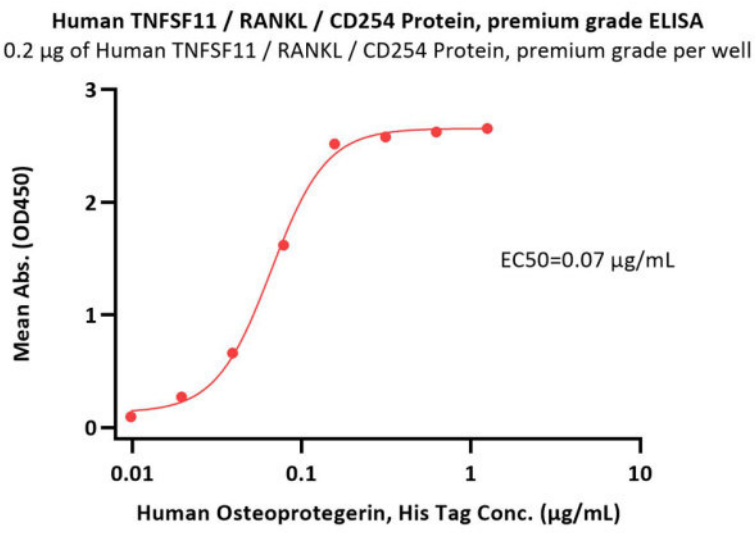


The purity of Human TNFSF11 Protein, premium grade (Cat. No. RAL-H5217) is more than 95% and the molecular weight of this protein is around 70-90 kDa verified by SEC-MALS.
Report

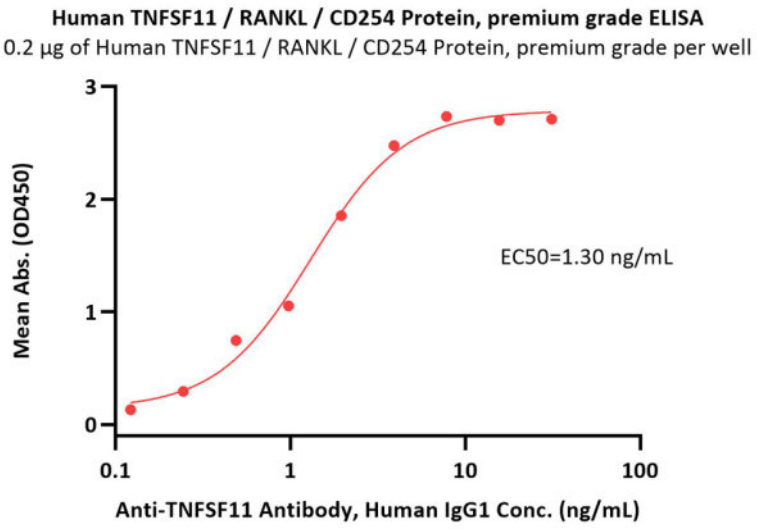
Bioactivity-ELISA



Immobilized Human TNFSF11 Protein, premium grade (Cat. No. RAL-H5217) at 2 μg/mL (100 μL/well) can bind Human RANK, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. RAK-H5251) with a linear range of 0.1-4 ng/mL (QC tested).



Immobilized Human TNFSF11 Protein, premium grade (Cat. No. RAL-H5217) at 2 μg/mL (100 μL/well) can bind Human Osteoprotegerin, His Tag (Cat. No. TNB-H5220) with a linear range of 0.01-0.313 μg/mL (Routinely tested).



Immobilized Human TNFSF11 Protein, premium grade (Cat. No. RAL-H5217) at 2 μg/mL (100 μL/well) can bind Anti-TNFSF11 Antibody, Human IgG1 with a linear range of 0.1-4 ng/mL (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 suggestion 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