



## Synonym

CD265, FEO, LOH18CR1, ODFR, OFE, OPTB7, OST5, PDB2, RANK, TNFRSF11A, TRANCER, CD265 antigen, ODFROSTS, RANKLOH18CR1, NFKB activator

## Source

Human RANK Protein, Mouse IgG2a Fc Tag (RAK-H5251) is expressed from human 293 cells (HEK293). It contains AA Ile 30 - Pro 212 (Accession # [Q9Y6Q6-1](#)).  
Predicted N-terminus: Ile 30

## Molecular Characterization

RANK(Ile 30 - Pro 212) Q9Y6Q6-1	mFc(Glu 98 - Lys 330) P01863
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### [Other Tags and Version Biotin & Other Labeled Version](#)

This protein carries a mouse IgG2a Fc tag at the C-terminus.

The protein has a calculated MW of 47.2 kDa. The protein migrates as 50-55 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 / rFC method.

## Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 µm filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5 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.**

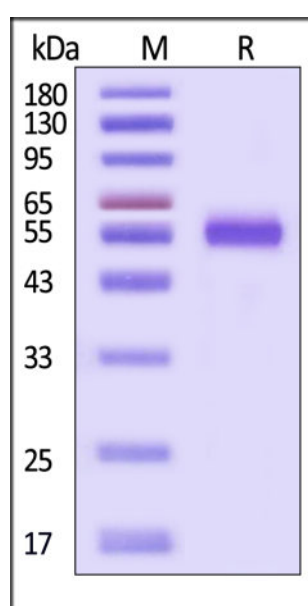
This product is stable after storage at:

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

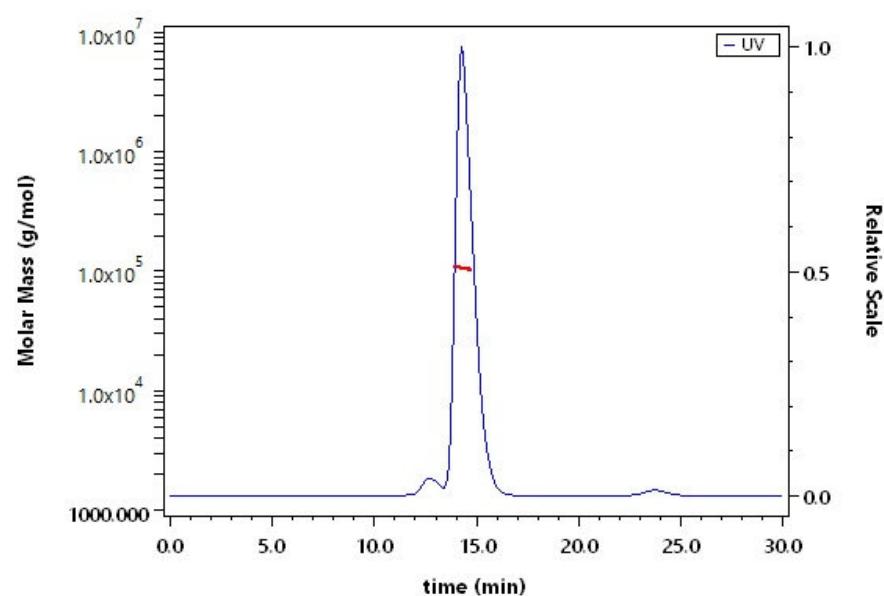
## ACRO Quality Management System

- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

## SDS-PAGE



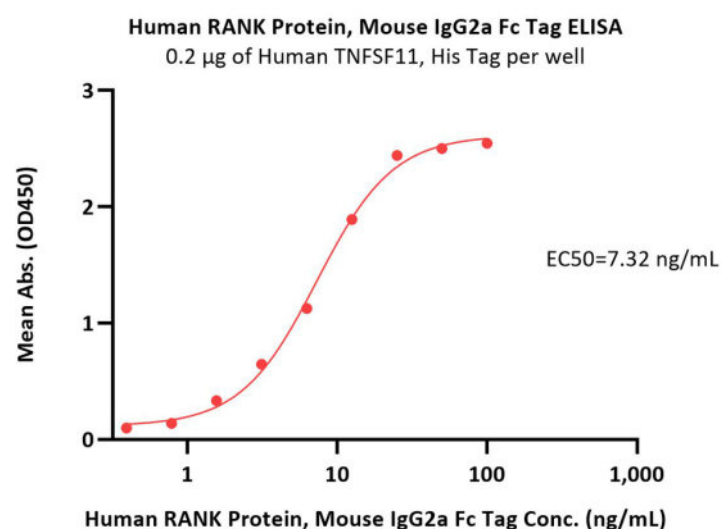
## SEC-MALS



Human RANK Protein, Mouse IgG2a Fc Tag 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](#)).

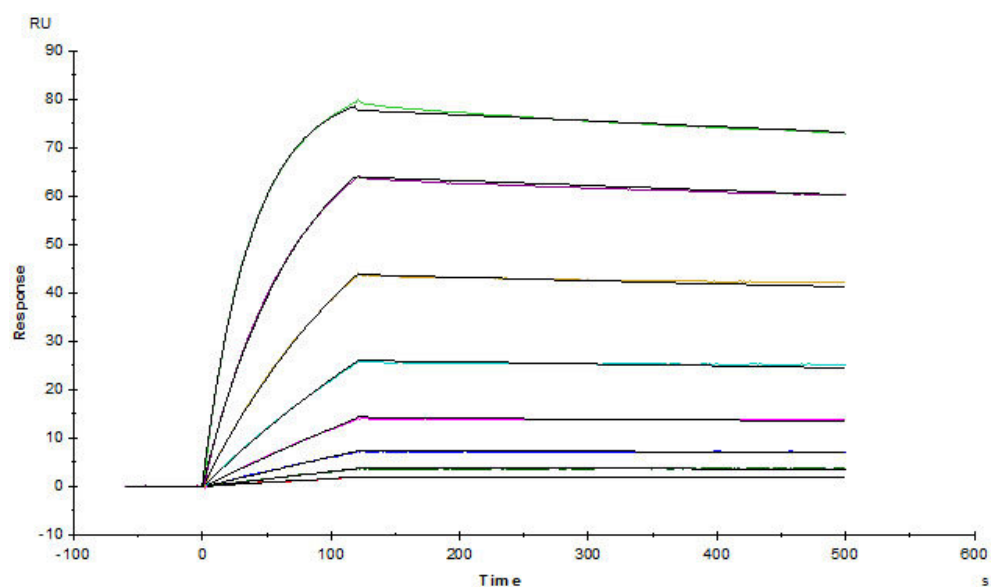
The purity of Human RANK Protein, Mouse IgG2a Fc Tag (Cat. No. RAK-H5251) is more than 90% and the molecular weight of this protein is around 95-120 kDa verified by SEC-MALS.

## Bioactivity-ELISA



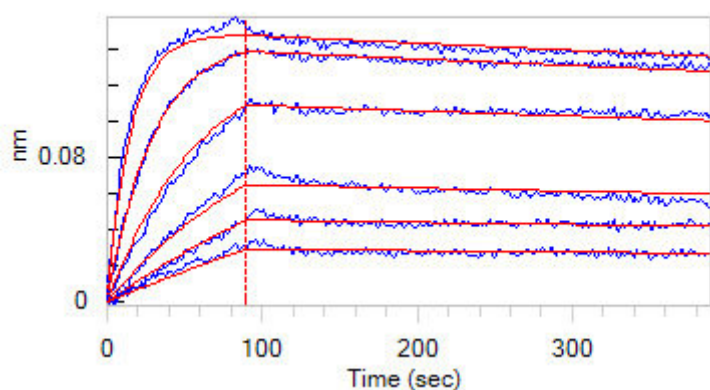
Immobilized Human TNFSF11, His Tag (Cat. No. RAL-H5240) at 2 µg/mL (100 µL/well) can bind Human RANK Protein, Mouse IgG2a Fc Tag (Cat. No. RAK-H5251) with a linear range of 0.4-13 ng/mL (QC tested).

## Bioactivity-SPR



Captured Human RANK Protein, Mouse IgG2a Fc Tag (Cat. No. RAK-H5251) on CM5 chip via Anti-Mouse antibodies surface can bind Human TNFSF11, 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 0.409 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

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## Background

RANK / TNFRSF11A is a member of the tumor necrosis factor receptor family. RANK / TNFRSF11A shares significant amino acid homology with other members of the TNF R family in its extracellular four cysteine-rich repeats. Functional genomics in mice showed that RANKL (TNFSF11), a member of the TNF ligand superfamily, and RANK (TNFRSF11a), the cognate TNFR family receptor for RANKL, were essential for osteoclastogenesis *in vivo*. A functional interaction between RANKL, expressed by bone stromal cells of the osteoblast lineage, and RANK, expressed by osteoclast precursors of hematopoietic myeloid lineage, is necessary for osteoclast differentiation, survival, and activation.

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