

Synonym

CD265, FEO, LOH18CR1, ODFR, OFE, OPTB7, OST, PDB2, RANK, TNFRSF11A, TRANCER, CD265 antigen, ODFROSTS, RANKLOH18CR1, NFkB activator

Source

Human RANK, Mouse IgG2a Fc Tag, low endotoxin (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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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 under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.1 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5. Normally trehalose is added as protectant before lyophilization.

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.

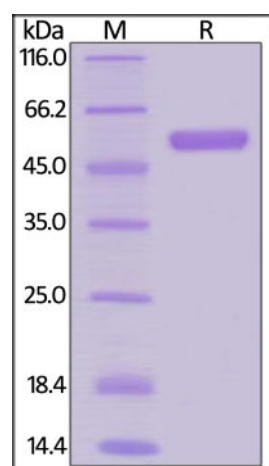
Storage

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

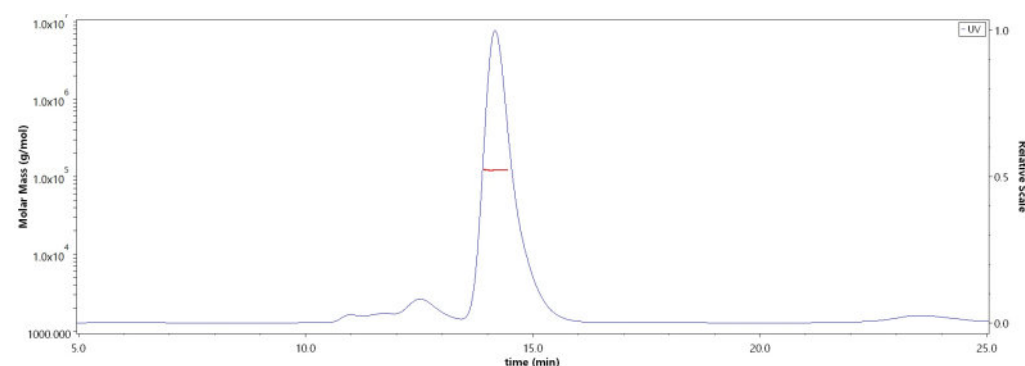
Please avoid repeated freeze-thaw cycles.

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.

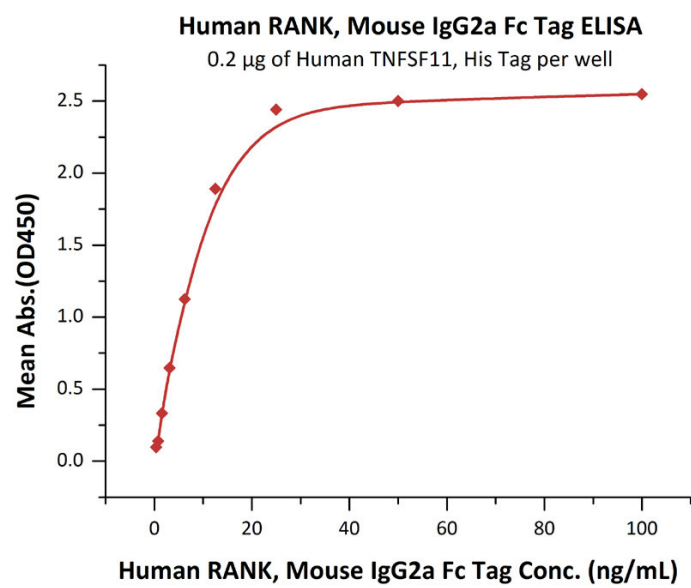
SDS-PAGE

Human RANK, Mouse IgG2a Fc Tag, low endotoxin on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA**SEC-MALS**

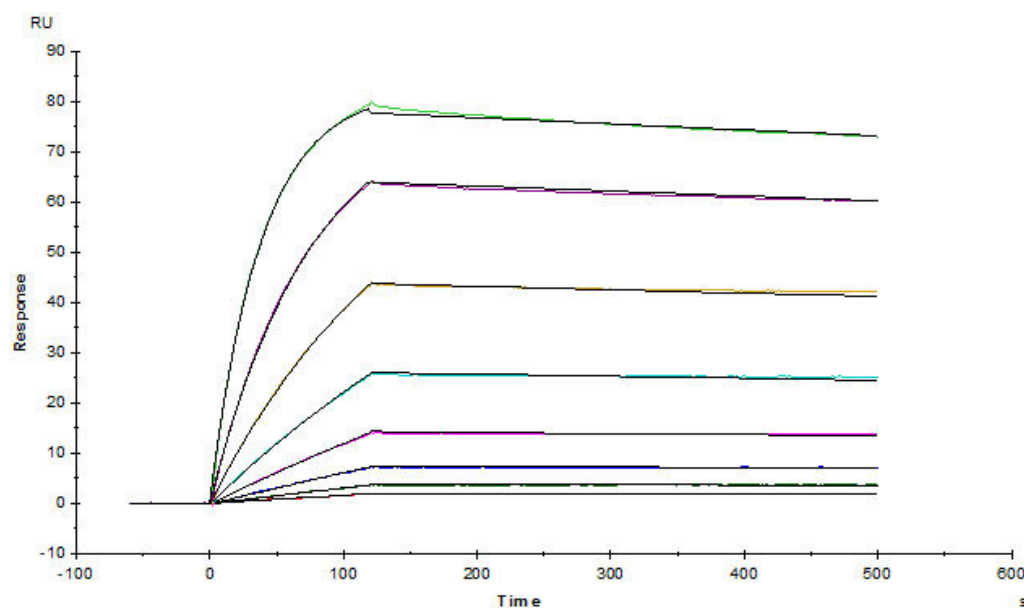
The purity of Human RANK, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. RAK-H5251) was more than 85% and the molecular weight of this protein is around 115-125 kDa verified by SEC-MALS.

[Report](#)



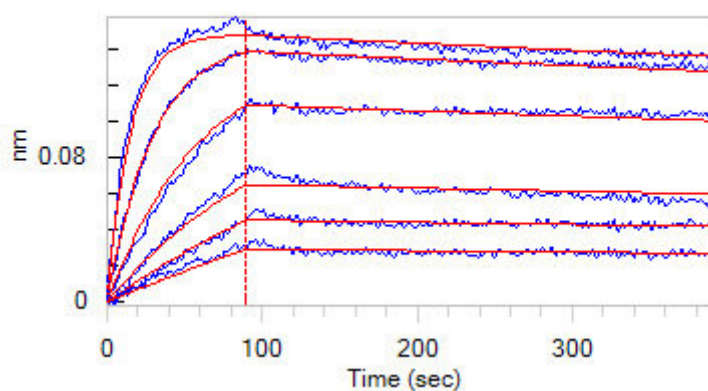
Immobilized Human TNFSF11, His Tag (Cat. No. [RAL-H5240](#)) at 2 µg/mL (100 µL/well) can bind Human RANK, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. [RAK-H5251](#)) with a linear range of 0.4-13 ng/mL (QC tested).

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, 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, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. [RAK-H5251](#)) on AMC Biosensor, can bind Human TNFSF11, His Tag (active trimer) (Cat. No. [RAL-H5240](#)) with an affinity constant of 0.409 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

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.

References

- (1) [Anderson DM., et al. 1997, Nature,.;390\(6656\), 175-9.](#)
- (2) [Tomoyasu A., et al. 1998, Biochem Biophys Res Commun., 245\(2\),382-7.](#)
- (3) [Dougall WC., et al. 2012, Clin Cancer Res.,18\(2\), 326-35.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.