

Human RANKL / OPGL / TNFSF11 / CD254 Protein (Fc Tag)

Catalog Number: 11682-H01H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

TNFSF11, RP11-86N24.2, CD254, ODF, OPGL, OPTB2, RANKL, TRANCE, hRANKL2, sOdf

Protein Construction:

A DNA sequence encoding the human TNFSF11 isoform 2 (O14788-2) (Gly 63-Asp 244) was fused with the Fc region of human IgG1 at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 86 % as determined by SDS-PAGE

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized human TNFRSF11B-His (Cat: 10271-H08H) at 10 µg/ml (100 µl/well) can bind human Fc-TNFSF11 (Cat: 11682-H01H) with a linear range of 3.125-200 ng/mL.

2. The bioactivity of hRANKL was determined by measuring the ability of hRANKL to induce TRAP activity in Raw 264.7 cells. The ED50 for this effect is typically 0.1-0.4 µg/mL.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Glu 20

Molecular Mass:

The recombinant human TNFSF11/Fc chimera is a disulfide-linked homodimeric protein. The reduced monomer consists of 443 amino acids and has a calculated molecular mass of 48.9 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh TNFSF11/Fc monomer is approximately 50-55 kDa due to the glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

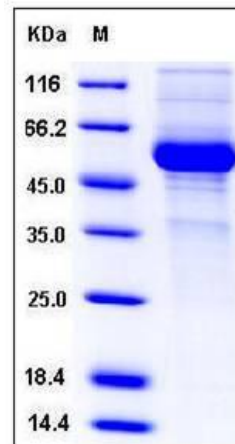
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Tumor necrosis factor ligand superfamily member 11, also known as Receptor activator of nuclear factor kappa-B ligand, Osteoprotegerin ligand, TNFSF11, RANKL, TRANCE, OPGL and CD254, is a single-pass type II membrane protein which belongs to the tumor necrosis factor family. TNFSF11 is a cytokine which binds to TNFRSF11B / OPG and to TNFRSF11A / RANK. It is an osteoclast differentiation and activation factor. TNFSF11 augments the ability of dendritic cells to stimulate naive T-cell proliferation. It may be an important regulator of interactions between T-cells and dendritic cells and may play a role in the regulation of the T-cell-dependent immune response. TNFSF11 may also play an important role in enhanced bone-resorption in humoral hypercalcemia of malignancy. Defects in TNFSF11 are the cause of osteopetrosis autosomal recessive type 2 (OPTB2), also known as osteoclast-poor osteopetrosis. Osteopetrosis is a rare genetic disease characterized by abnormally dense bone, due to defective resorption of immature bone.

References

1. Anderson DM. et al., 1997, Nature 390:175-9.
2. Nagai M. et al., 2000, Biochem. Biophys. Res. Commun. 269:532-6.
3. Sobacchi C. et al., 2007, Nat. Genet. 39: 960-2.

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