

Recombinant Human TNFSF11/RANKL/CD254 Protein

Catalog No.: RP00183

Sequence Information

Species **Gene ID**
Human 8600

Swiss Prot **Tags**
O14788 N-His

Synonyms

TNFSF11, CD254, ODF, OPGL, OPTB2, RANKL, TNLG6B, TRANCE, hRANKL2, sOdf

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as determined by SDS-PAGE; ≥ 90 % as determined by HPLC.

Calculated MW **Observed MW**
21.32 kDa 35 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1–0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

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 ligand for osteoprotegerin and functions as a key factor for osteoclast differentiation and activation. TNFSF11 was shown to be a dendritic cell survival factor and is involved in the regulation of T cell-dependent immune response. T cell activation was reported to induce expression of this gene and lead to an increase of osteoclastogenesis and bone loss. This protein was shown to activate antiapoptotic kinase AKT/PKB through a signaling complex involving SRC kinase and tumor necrosis factor receptor-associated factor (TRAF) 6, which indicated this protein may have a role in the regulation of cell apoptosis. Targeted disruption of the related gene in mice led to severe osteopetrosis and a lack of osteoclasts. The deficient mice exhibited defects in early differentiation of T and B lymphocytes, and failed to form lobulo-alveolar mammary structures during pregnancy.

Basic Information

Description

Recombinant Human TNFSF11/RANKL/CD254 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gly136–Asp317) of human TRANCE/RANK L/TNFSF11 (Accession #NP_143026.1) fused with a 6×His tag at the N-terminus.

Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Human TNFSF11 Protein at 2 μg/mL (100 μL/well) can bind Mouse TNFRSF11B with a linear range of 0.049–13.74 ng/mL.
2. Measured by its ability to induce osteoclast differentiation of RAW 264.7 mouse monocyte/macrophage cells. The ED50 for this effect is 10.85–43.42 ng/mL, corresponding to a specific activity of 2.30×10⁴–9.22×10⁴ units/mg.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at –20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

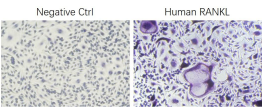
Contact

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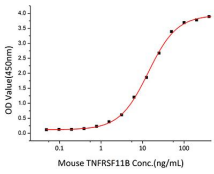
✉ | cn.market@abclonal.com.cn

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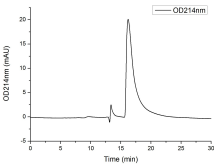
Validation Data



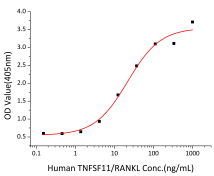
Measured by its ability to induce osteoclast differentiation of mouse bone marrow cells.



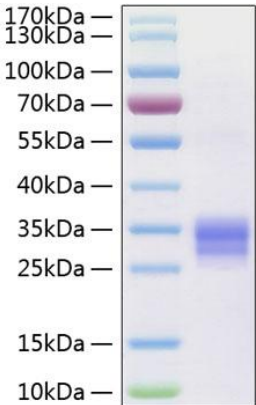
Immobilized Human TNFSF11 Protein at 2 µg/mL (100 µL/well) can bind Mouse TNFRSF11B with a linear range of 0.049-13.74 ng/mL.



The purity of Human TRANCE/RANK L/TNFSF11 Protein (Cat.RP00183) was greater than 90% as determined by SEC-HPLC.



Measured by its ability to induce osteoclast differentiation of RAW 264.7 mouse monocyte/macrophage cells. The ED₅₀ for this effect is 10.85-43.42 ng/mL, corresponding to a specific activity of 2.30×10⁴~9.22×10⁴ units/mg.



Recombinant Human TNFSF11/RANKL/CD254 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.