Recombinant human TRANCE/RANK L/TNFSF11 protein

Catalog Number: ATGP4157

PRODUCT INFORMATION

Expression system
E.coli

Domain
140-317aa

UniProt No.
O14788

NCBI Accession No.
NP_003692.1

Alternative Names
Tumor necrosis factor ligand superfamily member 11, Osteoclast differentiation factor, ODF, Osteoprotegerin ligand, OPGL, Receptor activator of nuclear factor kappa-B ligand, RANKL, TNF-related activation-induced cytokine, TRANCE, CD254

PRODUCT SPECIFICATION

Molecular Weight
22.3 kDa (199aa) confirmed by MALDI-TOF

Concentration
0.5mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 0.1M NaCl, 1mM DTT

Purity
> 85% by SDS – PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Measured by its ability to induce osteoclast differentiation of RAW 264.7 mouse monocyte/macrophage cells. The ED50 range ≤ 25 ng/ml.

Tag
His-Tag

Application
SDS-PAGE, Bioactivity

Storage Condition
Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20C or -70C. Avoid repeated freezing and thawing cycles

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BACKGROUND

Description

TNFSF11, also known as RANKL, is a member of the tumor necrosis factor (TNF) cytokine family which is a ligand for osteoprotegerin and functions as a key factor for osteoclast differentiation and activation. TNFSF11 also has a function in the immune system, where it is expressed by T helper cells and is thought to be involved in dendritic cell maturation. TNFSF11 is important in bone metabolism. This natural and necessary surface-bound molecule (also known as CD254) found on osteoblasts serves to activate osteoclasts, which are the cells involved in bone resorption. Recombinant human TNFSF11 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography.

Amino acid Sequence

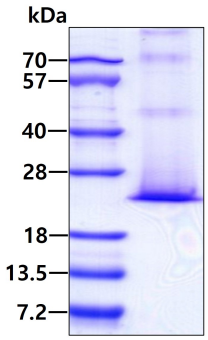
<MGSSHHHHHH SSGLVPRGSH M>IRAEKAMVD GSWLDLAKRS KLEAQPFAHL TINATDIPSG SHKVSLSSWY HDRGWAKISN MTFSNGKLIV NQDGFYYLYA NICFRHHETS GDLATEYLQL MVYVTKTSIK IPSSHTLMKG GSTKYWSGNS EFHFYSINVG GFFKLRSGEE ISIEVSNPSL LDPDQDATYF GAFKVRDID

General References

Lam J., et al. (2001) J. Clin. Invest. 108:971-979 Ito S., et al. (2002) J. Biol. Chem. 277:6631-6636

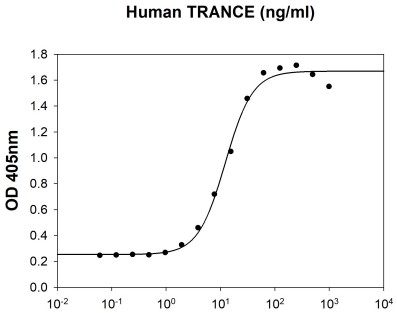
DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

Biological Activity



Human TRANCE stimulates osteoclast differentiation in the RAW 264.7 mouse monocyte/macrophage cells. The ED50 range ≤ 25 ng/ml.