

Recombinant human TNFSF11, Active, His-tagged

Cat. No. TNFSF11-1564H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant human sRANKL is a glycosylated polypeptide chain containing 175 amino acids (70 – 244 aa of O14788 TNF11_HUMAN) and a His-tag at the N-terminal end. It has a predicted molecular mass of 21.1 kDa, however as result of glycosylation, the recombinant protein could migrate as two bands with an apparent molecular mass of 21-23 kDa in SDS PAGE.

Species

Human

Source

Nicotiana Benthamiana

Description

Recombinant human RANKL is a member of TNF super family, a cytokine that play a central role in bone remodeling and disorders of mineral metabolism. It was shown to be a dendritic cell survival factor, T-cell activator and osteoclast regulator because RANKL mediates the osteoclast differentiation, survival and activation. Native RANKL is a type II trans-membrane protein with an extracellular binding domain that interacts with RANK and OPG receptors. OPG protects the skeleton from excessive bone resorption by binding to RANKL and preventing it from binding to its receptor, RANK. Thus, RANKL/OPG ratio became an important determinant of bone mass and skeletal integrity. In addition, this protein was shown to activate anti-apoptotic kinase AKT/PKB through a signalling complex involving SRC kinase and tumour necrosis factor receptor-associated factor (TREAF). Recent findings shown that OPG/RANK/RANKL system has been identifies as a possible mediator of arterial calcification suggesting common links between osteoporosis and vascular diseases.

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Form	Recombinant human RANKL is lyophilized from 10mM Phosphate Potassium buffer pH 8 and 0.2M NaCl.
Molecular Mass	Predicted molecular mass of 21.1 kDa, could migrate as two bands with an apparent molecular mass of 21-23 kDa in SDS PAGE.
AA Sequence	HHHHHHHHHHEKAMVDGSWLDLAKRSKLEAQPFAHLTINATDIPSGSHKVSLSWY HDRGWAKISNMTFSNGKLI VNQDGFYYLYANICFRHHETSGDLATEYLQLMVYVTK TSIKIPSSHTLMKGGSTKYWSGNSEFHFYSINVGGFVK LRSGEEISIEVSNPSLLDPD QDATYFGAFKVRDID
Endotoxin	< 0.04 EU/μg protein (LAL)
Purity	>97% by SDS-PAGE gel
Storage	This lyophilized preparation is stable at 2-8°C for short term, long storage it should be kept at -20°C. Reconstituted protein should be stored in working aliquots at -20°C. Repeated freezing and thawing is not recommended.
Reconstitution	Centrifuge vial before opening. Lyophilized protein should be reconstituted in water to a concentration of 200 ng/μl. Optimal concentration should be determined for specific application and cell lines.

GENE INFORMATION

Gene Name	TNFSF11 tumor necrosis factor (ligand) superfamily, member 11 [Homo sapiens]
Official Symbol	TNFSF11
Synonyms	TNFSF11; tumor necrosis factor (ligand) superfamily, member 11; tumor necrosis factor ligand superfamily member 11; CD254; ODF; OPGL; RANKL; TRANCE;

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	osteoprotegerin ligand; osteoclast differentiation factor; TNF-related activation-induced cytokine; receptor activator of nuclear factor kappa B ligand; receptor activator of nuclear factor kappa-B ligand; sOdf; OPTB2; hRANKL2;
Gene ID	8600
mRNA Refseq	NM_003701
Protein Refseq	NP_003692
MIM	602642
UniProt ID	O14788
Chromosome Location	13q14
Pathway	Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; IL6-mediated signaling events, organism-specific biosystem; Osteoblast Signaling, organism-specific biosystem; Osteoclast Signaling, organism-specific biosystem; Osteoclast differentiation, organism-specific biosystem; Osteoclast differentiation, conserved biosystem;
Function	cytokine activity; cytokine activity; receptor activity; tumor necrosis factor receptor binding; tumor necrosis factor receptor superfamily binding;