

Recombinant Human TNFSF11

Cat. No. TNFSF11-31288TH Lot. No. (See product label)

SPECIFICATION

Product Overview Highly pure (>98%) recombinant human sRANKL.

Species Human

Source E.coli

ProteinLength 143-317 aa

Description

This gene encodes 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. This protein 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. Two alternatively spliced transcript variants have been found.

Tissue specificity

Highest in the peripheral lymph nodes, weak in spleen, peripheral blood Leukocytes, bone marrow, heart, placenta, skeletal muscle, stomach and thyroid.

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Form	Lyophilised
Storage buffer	Formulized from 5mM Sodium Phosphate, pH 7.6 + 75 mM NaCl.
Storage	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Sequences of amino acids	hsRANK-L is a soluble 20.0 kDa protein, comprising the full-length of the TNF-like extracellular domain of RANKL:MEKAMVDGSWLDLAKRSKLEAQPFAHLTINATDIPSGS HKVSLSSW YHDRGWAKISNMTFSNGKLIVNQDGFYYLYANICFRH HETSGDLATEY LQLMVYVTKTSIKIPSSHTLMKGGST KYWSGNSEFHFYSINVGGFFKLRSGEEISIEV SNPSL LDPDQDATYFGAFKVRDID
Sequence Similarities	Belongs to the tumor necrosis factor family.

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;
Gene ID	8600
mRNA Refseq	NM_003701
Protein Refseq	NP_003692

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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;
Function	cytokine activity; cytokine activity; receptor activity; tumor necrosis factor receptor binding; tumor necrosis factor receptor binding;

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