Active Recombinant Human TNFSF11 protein, His tagged

Cat. No. TNFSF11-019H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human TNFSF11 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography.
Species	Human
Source	E.coli
ProteinLength	140-317 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 dentritic 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.
Tag	N-His

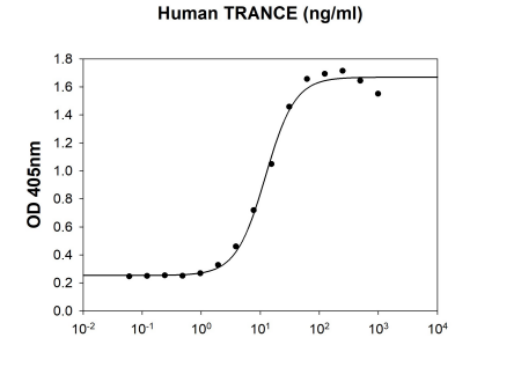
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Form	Liquid
Bio-activity	Measured by its ability to induce osteoclast differentiation of RAW 264.7 mouse monocyte/macrophage cells. The ED50 range ≤ 25 ng/mL.
Molecular Mass	22.3 kDa
AA Sequence	< MGSSHHHHHHSSGLVPRGSHM> IRAEKAMVDGSWLDLAKRSKLEAQPFAHLTIN ATDIPSGSHKVSLSSWYHDRGWAKISNMTFSNGKLIVNQDGFYYLYANICFRHHETS GDLATEYLQLMVYVTKTSIKIPSSHTLMKGGSTKYWSGNSEFHFYSINVGGFFKLRS GEEISIEVSNPSLLDPDQDATYFGAFKVRDID
Endotoxin	< 1 EU/μg of protein determined by LAL method
Purity	> 85% by SDS-PAGE
Applications	SDS-PAGE, Bioactivity
Storage	Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 or -70 centigrade. Avoid repeated freezing and thawing cycles.
Concentration	0.5 mg/mL (determined by Bradford assay)
Storage Buffer	20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 0.1M NaCl, 1mM DTT
References	1. Lam J., et al. (2001) J. Clin. Invest. 108:971-979 Ito S., et al. (2002) J. Biol. Chem. 277:6631-6636

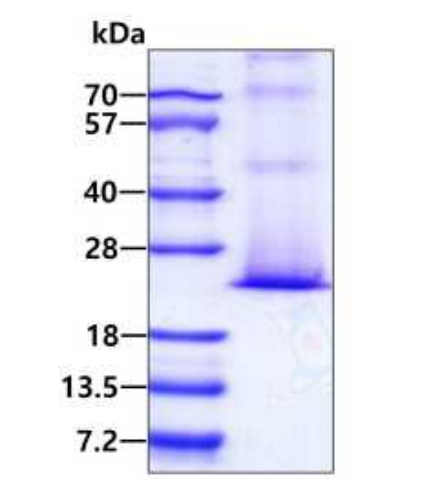
GENE INFORMATION

Gene Name	TNFSF11 tumor necrosis factor (ligand) superfamily, member 11 [Homo sapiens

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	(human)]
Official Symbol	TNFSF11
Synonyms	TNFSF11; tumor necrosis factor (ligand) superfamily, member 11; tumor necrosis factor ligand superfamily member 11; CD254; ODF; OPGL; RANKL; TRANCE; 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
Biological Activity	 Human TRANCE stimulates osteoclast differentiation in the RAW 264.7 mouse

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	monocyte/macrophage cells. The ED50 range ≤ 25 ng/mL.
SDS-PAGE	 3 μg by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

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