

Active Recombinant Mouse Tnfsf11 Protein

Cat. No. Tnfsf11-6551M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of Mouse tumor necrosis factor (ligand) superfamily, member 11 (Tnfsf11) without tag was expressed in E. coli.
Species	Mouse
Source	E.coli
Description	Cytokine that binds to TNFRSF11B/OPG and to TNFRSF11A/RANK. Osteoclast differentiation and activation factor. Augments the ability of dendritic cells to stimulate naive T-cell proliferation. May be an important regulator of interactions between T-cells and dendritic cells and may play a role in the regulation of the T-cell-dependent immune response. May also play an important role in enhanced bone-resorption in humoral hypercalcemia of malignancy. Induces osteoclastogenesis by activating multiple signaling pathways in osteoclast precursor cells, chief among which is induction of long lasting oscillations in the intracellular concentration of Ca (2+) resulting in the activation of NFATC1, which translocates to the nucleus and induces osteoclast-specific gene transcription to allow differentiation of osteoclasts. During osteoclast differentiation, in a TMEM64 and ATP2A2-dependent manner induces activation of CREB1 and mitochondrial ROS generation necessary for proper osteoclast generation.
Bio-activity	Determined by its dose-dependent ability to induce reporter gene in HT-29 NF-kB Luc reporter cells.

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Molecular Mass	19.4 kDa
AA Sequence	PAMMEGSWLDVAQRGKPEAQPFHAHLTINAASIPSGSHKVTLSWYHDRGWAKISN MTLSNGKLRVNQDGFYYLYANICFRHHETSGSVPTDYLQLMVYVVKTSIKIPSSHNL MKGGSTKNWSGNSEHFHYSINVGGFFKL RAGEEISIQVSNPSLLDPDQDATYFGAFK VQDID
Endotoxin	< 0.1 ng/μg of protein (< 1 EU/μg)
Purity	> 95% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for at least 6 months from date of receipt under proper storage and handling conditions.
Storage	Store at -80 centigrade.
Storage Buffer	Lyophilized from a 0.2 μM filtered solution of 20 mM pH 7.2 phosphate buffer, 100 mM NaCl, pH 7.2

GENE INFORMATION

Gene Name	Tnfsf11 tumor necrosis factor (ligand) superfamily, member 11 [Mus musculus (house mouse)]
Official Symbol	Tnfsf11
Synonyms	TNFSF11; tumor necrosis factor (ligand) superfamily, member 11; tumor necrosis factor ligand superfamily member 11; OPG ligand; osteoprotegerin ligand; osteoclast differentiation factor; receptor activator of NF-kappaB ligand; TNF-related activation-induced cytokine; receptor activator of nuclear factor kappa B ligand; receptor activator of nuclear factor kappa-B ligand; tumor necrosis factor-related activation-

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induced cytokine; ODF; OPG; OPGL; RANKL; Ly109l; Trance

Gene ID 21943

mRNA Refseq NM_011613

Protein Refseq NP_035743

UniProt ID O35235

SDS-PAGE



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