

## Active Recombinant Mouse Tnfsf11 Protein, His-tagged

Cat. No. Tnfsf11-6552M Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Purified recombinant protein of Mouse tumor necrosis factor (ligand) superfamily, member 11 (Tnfsf11 / RANKL / Trance) with a N-His tag was expressed in Sf9.
<b>Species</b>	Mouse
<b>Source</b>	Sf9 Cells
<b>ProteinLength</b>	Lis158-Asp316
<b>Description</b>	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.
<b>Bio-activity</b>	Bioactivity was measured by its property to induce osteoclast differentiation in

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	RAW264.7 cells in the absence of any cross-linking. The bioactivity is equivalent to competitor cytokines.
<b>Molecular Mass</b>	20 kDa
<b>Endotoxin</b>	Less than 0.01 ng/μg protein as determined by the LAL method
<b>Purity</b>	> 95%, as determined by Coomassie stained SDS-PAGE.
<b>Stability</b>	Unopened vial can be stored between 2 and 8 centigrade for up to 2 weeks, at -20 centigrade for up to 6 months, or at -70 centigrade or below until the expiration date. Aliquots can be stored between 2 and 8 centigrade for up to one week and stored at -20 centigrade or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
<b>Storage</b>	Store at -80 centigrade.
<b>Concentration</b>	Protein formulated and vialled at >50 μg/mL in specified buffer
<b>Storage Buffer</b>	1 x PBS

## GENE INFORMATION

<b>Gene Name</b>	Tnfsf11 tumor necrosis factor (ligand) superfamily, member 11 [ <i>Mus musculus</i> (house mouse) ]
<b>Official Symbol</b>	Tnfsf11
<b>Synonyms</b>	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

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activator of nuclear factor kappa-B ligand; tumor necrosis factor-related activation-induced cytokine; ODF; OPG; OPGL; RANKL; Ly109I; Trance

**Gene ID** 21943

**mRNA Refseq** NM\_011613

**Protein Refseq** NP\_035743

**UniProt ID** O35235

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