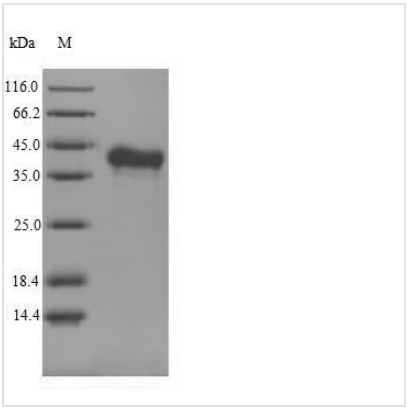
Recombinant Mouse Tumor necrosis factor ligand superfamily member 11 (Tnfsf11), partial

Product Code	CSB-EP023986MO
Relevance	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.
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O35235
Alias	Osteoclast differentiation factor Short name:ODF Osteoprotegerin ligand Short name:OPGL Receptor activator of nuclear factor kappa-B ligand Short name:RANKL TNF-related activation-induced cytokine Short name:TRANCE CD_antigen: CD254
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	YFRAQMDPNRISEDSTHCFYRILRLHENADLQDSTLESEDTLPDSCRRMKQAF QGAVQKELQHIVGPQRFSGAPAMMEGSWLDVAQRGKPEAQPFAHLTINAASI PSGSHKVTLSSWYHDRGWAKISNMTLSNGKLRVNQDGFYYLYANICFRHHET SGSVPTDYLQLMVYVVKTSIKIPSSHNLMKGGSTKNWSGNSEFHFYSINVGGF FKLRAGEEISIQVSNPSLLDPDQDATYFGAFKVQDID
Lead Time	3-7 business days
Research Area	Others
Source	E.coli
Gene Names	Tnfsf11
Expression Region	70-316aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	43.9kDa
Protein Description	Extracellular Domain
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Amino acids 70-316 form the expressed segment for recombinant Mouse Tnfsf11. The calculated molecular weight for this Tnfsf11 protein is 43.9 kDa. This Tnfsf11 protein is produced using e.coli expression system. The Tnfsf11 coding gene included the N-terminal 6xHis-SUMO tag, which simplifies the detection and purification processes of the recombinant Tnfsf11 protein in following stages of expression and purification.

Tumor necrosis factor ligand superfamily member 11 (Tnfsf11), also known as RANKL, is a key cytokine involved in the regulation of bone metabolism. It plays a crucial role in the differentiation and activation of osteoclasts, the cells responsible for bone resorption. RANKL binds to its receptor RANK on the surface of osteoclast precursors, triggering a signaling cascade that promotes osteoclast formation, function, and survival. Additionally, RANKL is essential for various physiological processes, including the development of lymph nodes and the mammary gland. Research on Tnfsf11 spans multiple areas, such as bone biology, immune system regulation, and reproductive physiology. In bone biology, investigations focus on understanding how RANKL signaling influences bone remodeling and its implications for diseases like osteoporosis and arthritis. In the immune system, RANKL is involved in the regulation of lymphoid tissue development and the immune response. Moreover, studies exploring the role of RANKL in reproductive physiology highlight its importance in mammary gland development and lactation. Targeting the RANKL/RANK pathway has therapeutic potential for bone-related disorders.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.