Data Sheet (Cat.No.TMPY-00537)

TargetMol

RANKL/TNFSF11/CD254 Protein, Cynomolgus, Recombinant (hFc)

General Information

Synonyms:	tumor necrosis factor (ligand) superfamily, member 11
Protein Construction:	A DNA sequence encoding the cynomolgus TNFSF11 (G7PW41) (Gly136-Asp317) was expressed with the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	G7PW41
Molecular Weight:	48.9 kDa (predicted); 55 kDa (reducing conditions)

QC Testing

Biological Activity:	1. Immobilized Cynomolgus S4-Fc3L3-TNFSF11 at 10 μg/ml (100 μl/well) can bind biotinylated human TNFRSF11B-His , The EC50 of biotinylated human TNFRSF11B-His is 7.94-18.52 ng/ml. 2. The bioactivity of RANKL was determined by measuring the ability of RANKL to induce TRAP activity in RAW264.7 cells. The ED50 for this effect is typically 7-35 ng/mL.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Tumor necrosis factor ligand superfamily member 11, also known as Receptor activator of nuclear factor kappa-B ligand, Osteoprotegerin ligand, TNFSF11, RANKL, TRANCE, OPGL and CD254, is a single-pass type II membrane

protein that belongs to the tumor necrosis factor family. The receptor activator of nuclear factor-kappaB ligand (RANKL), its cognate receptor RANK, and its natural decoy receptor osteoprotegerin have been identified as the final effector molecules of osteoclastic bone resorption. RANK and RANKL are key regulators of bone remodeling and regulate T cell/dendritic cell communications, and lymph node formation. Moreover, RANKL and RANK are expressed in mammary gland epithelial cells and control the development of a lactating mammary gland during pregnancy. Genetically, RANKL and RANK are essential for the development and activation of osteoclasts and bone loss in response to virtually all triggers tested. Inhibition of RANKL function via the natural decoy receptor osteoprotegerin (OPG, TNFRSF11B) prevents bone loss in postmenopausal osteoporosis and cancer metastases. Importantly, RANKL appears to be the pathogenetic principle that causes bone and cartilage destruction in arthritis. RANK-RANKL signaling not only activates a variety of downstream signaling pathways required for osteoclast development, but crosstalk with other signaling pathways also fine-tunes bone homeostasis both in normal physiology and disease. In addition, RANKL and RANK have essential roles in lymph node formation, establishment of the thymic microenvironment, and development of a lactating mammary gland during pregnancy.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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