# Rhesus Osteoprotegerin / TNFRSF11B Protein (Fc Tag)

**Catalog Number:** **90136-C02H**

## General Information

**Gene Name Synonym:**

TNFRSF11B

**Protein Construction:**

A DNA sequence encoding the rhesus TNFRSF11B (XP_001096915.1) (Met28-Leu428) was expressed with the Fc region of human IgG1 at the C-terminus.

**Source:** Rhesus

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

**Endotoxin:**

< 1.0 EU per μg of the protein as determined by the LAL method

**Stability:**

Samples are stable for up to twelve months from date of receipt at -70 ℃

**Predicted N terminal:** Glu 49

**Molecular Mass:**

The recombinant rhesus TNFRSF11B comprises 621 amino acids and has a calculated molecular mass of 65 KDa.

**Formulation:**

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

**Storage:**

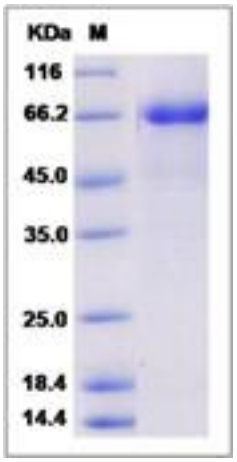
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

**Reconstitution:**

Detailed reconstitution instructions are sent along with the products.

**SDS-PAGE:**




## Protein Description

Osteoprotegerin or TNFRSF11B is a member of the TNF-receptor superfamily. This protein is an osteoblast-secreted decoy receptor that functions as a negative regulator of bone resorption. This protein specifically binds to its ligand, osteoprotegerin ligand, both of which are key extracellular regulators of osteoclast development. Studies of the mouse counterpart also suggest that this protein and its ligand play a role in lymph-node organogenesis and vascular calcification. Alternatively spliced transcript variants of this gene have been reported, but their full length nature has not been determined. Osteoprotegerin/TNFRSF11B acts as decoy receptor for RANKL and thereby neutralizes its function in osteoclastogenesis. This protein may inhibit the activation of osteoclasts and promotes osteoclast apoptosis in vitro. Bone homeostasis seems to depend on the local RANKL/OPG ratio. Osteoprotegerin/TNFRSF11B also play a role in preventing arterial calcification, act as decoy receptor for TRAIL and protect against apoptosis. TRAIL binding blocks the inhibition of osteoclastogenesis.

### References

1.Collin-Osdoby P. (2005) Regulation of vascular calcification by osteoclast regulatory factors RANKL and osteoprotegerin. Circ Res. 95 (11): 1046-57. 2.Boyce BF, *et al.* (2007) Biology of RANK, RANKL, and osteoprotegerin. Arthritis Res. Ther. 9 Suppl 1: S1. 3.Blázquez-Medela AM, *et al.* ( 2011) Osteoprotegerin and diabetes-associated pathologies. Curr Mol Med. 11 (5): 401-16.