Human Osteoprotegerin / TNFRSF11B Protein (Fc Tag)

Catalog Number: **10271-H02B**

General Information

Gene Name Synonym:

MGC29565; OCIF; OPG; PDB5; TR1

Protein Construction:

A DNA sequence encoding the human TNFRSF11B (NP_002537.3) (Met1-Leu401) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

Endotoxin:

< 1.0 EU per μg 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 22

Molecular Mass:

The recombinant human TNFRSF11B consists of 618 amino acids and predicts a molecular mass of 70.3 kDa.

Formulation:

Lyophilized from sterile pH 7.0, 100 mM Glycine, 10 mM NaCl.

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:

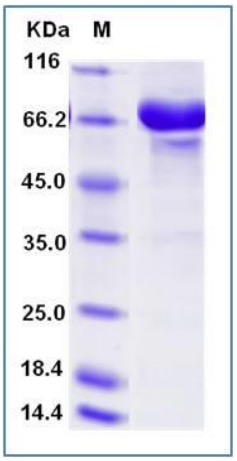
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.