

Synonym

TNFRSF11B, OCIF, OPG, Osteoprotegerin

Source

Human Osteoprotegerin, His Tag(TNB-H5220) is expressed from human 293 cells (HEK293). It contains AA Glu 22 - Leu 401 (Accession # [NP_002537](#)).
Predicted N-terminus: Glu 22

Molecular Characterization

OPG(Glu 22 - Leu 401)
NP_002537 Poly-his

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 44.4 kDa. The protein migrates as 50-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

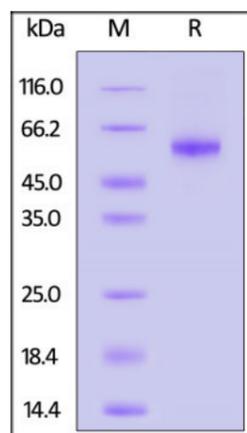
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

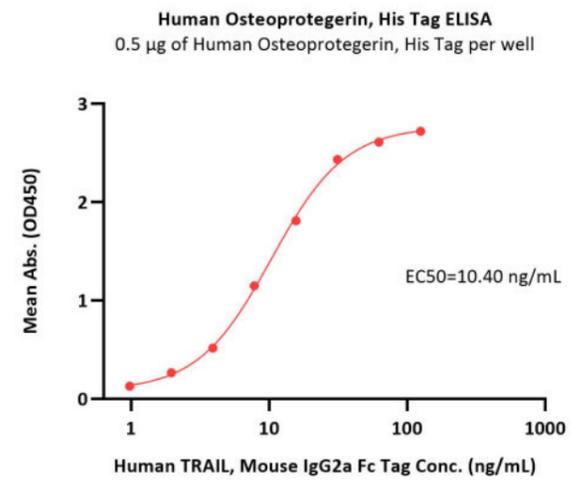
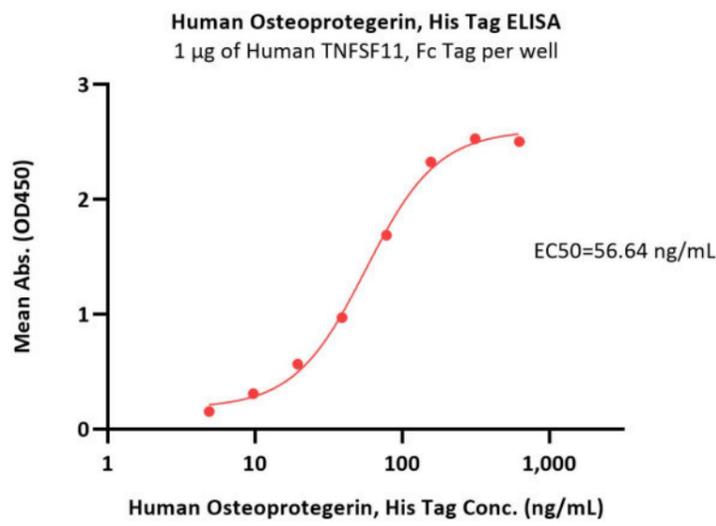
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Human Osteoprotegerin, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

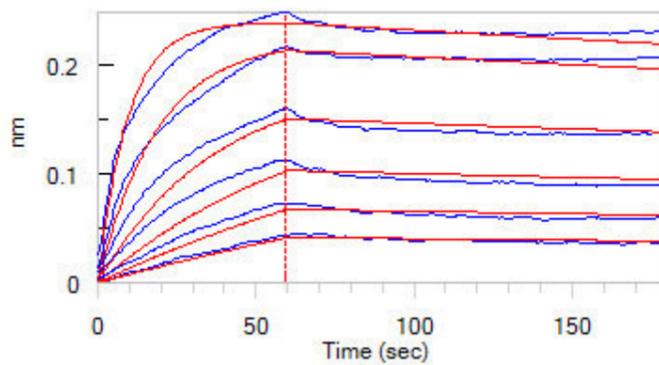
Bioactivity-ELISA



Immobilized Human TNFSF11, Fc Tag (Cat. No. RAL-H5265) at 10 μ g/mL (100 μ L/well) can bind Human Osteoprotegerin, His Tag (Cat. No. TNB-H5220) with a linear range of 5-156 ng/mL (QC tested).

Immobilized Human Osteoprotegerin, His Tag (Cat. No. TNB-H5220) at 5 μ g/mL (100 μ L/well) can bind Human TRAIL, Mouse IgG2a Fc Tag (Cat. No. TRL-H5259) with a linear range of 0.5-16 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Human Osteoprotegerin, His Tag (Cat. No. TNB-H5220) on HIS1K Biosensor, can bind Human TRAIL with an affinity constant of 0.831 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Tumor necrosis factor receptor superfamily member 11B (TNFRSF11B) is also known as Osteoclastogenesis inhibitory factor (OCIF), Osteoprotegerin (OPG). TNFRSF11B is a secreted homodimer protein, which can interact with TNFSF10 and TNFSF11. TNFRSF11B acts as decoy receptor for TNFSF11/RANKL and thereby neutralizes its function in osteoclastogenesis. TNFRSF11B inhibits the activation of osteoclasts and promotes osteoclast apoptosis in vitro. Bone homeostasis seems to depend on the local ratio between TNFSF11 and TNFRSF11B. TNFSF10/TRAIL binding blocks the inhibition of osteoclastogenesis.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.