Human Osteoprotegerin / TNFRSF11B Protein, Fc Tag

Catalog # TNB-H5259

Synonym

TNFRSF11B,OCIF,OPG,Osteoprotegerin

Source

Human Osteoprotegerin, Fc Tag(TNB-H5259) 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	Fc(Pro 100 - Lys 330) P01857

This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 70.2 kDa. The protein migrates as 90 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>92% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 100 mM Glycine, pH7.5 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

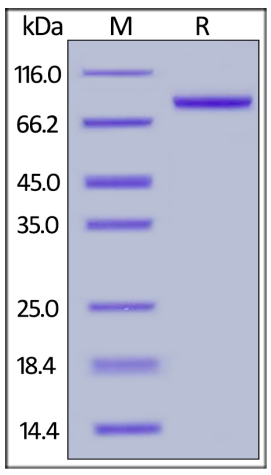
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

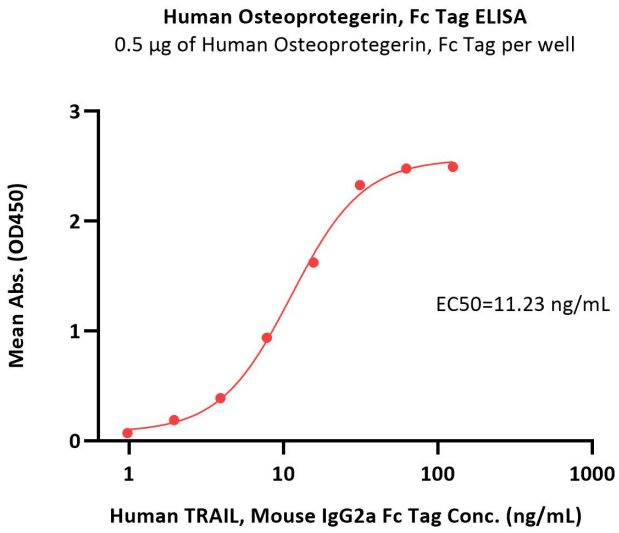
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



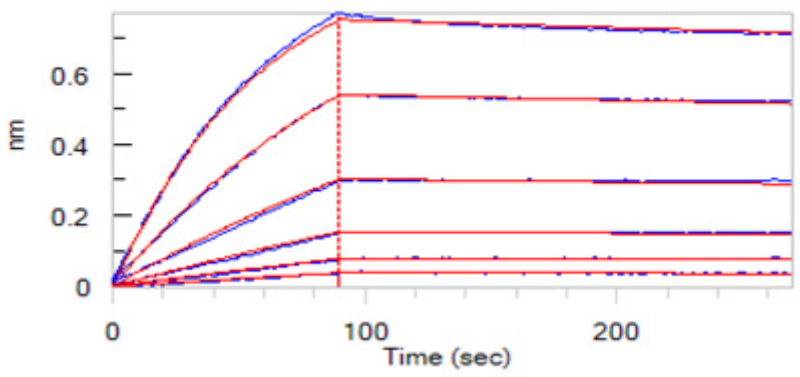
Human Osteoprotegerin, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 92%.

Bioactivity-ELISA

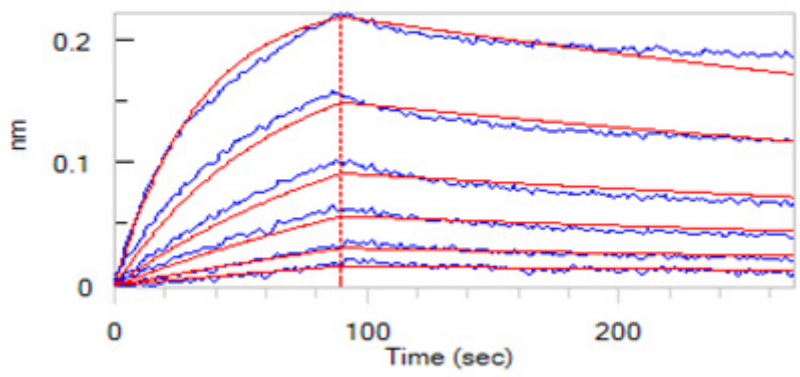


Immobilized Human Osteoprotegerin, Fc Tag (Cat. No. TNB-H5259) at 5 μg/mL (100 μL/well) can bind Human TRAIL, Mouse IgG2a Fc Tag with a linear range of 4-16 ng/mL (QC tested).

Bioactivity-BLI



Loaded Human TRAIL, His Tag on HIS1K Biosensor, can bind Human Osteoprotegerin, Fc Tag (Cat. No. TNB-H5259) with an affinity constant of 1.65 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human Osteoprotegerin, Fc Tag (Cat. No. TNB-H5259) on AHC Biosensor, can bind Human TRAIL, His Tag with an affinity constant of 2.32 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.