

OPG

Osteoprotegerin human human, recombinant, *E. coli*

Cat. No.	Amount
PR-449	50 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized. The protein was lyophilized from a concentrated (1mg/ml) solution with 1X PBS, 0.1% SDS and 1mM DTT.

Solubility

It is recommended to reconstitute the lyophilized Osteoprotegerin in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Application

May be used as Positive control for Western blots, in Antibody production and Protein assays.

Molecular Weight

31 kDa

Purity

≥ 80% by SDS-PAGE and RP-HPLC

Description

Osteoprotegerin, which is a member of the tumor necrosis factor receptor superfamily and is involved in the regulation of bone metabolism. OPG and its ligand (OPGL) are cytokines regulating osteoclastogenesis. OPGL binds to receptors on the surface of preosteoclasts and stimulates their differentiation into active osteoclasts. This leads to osteoresorption. OPG inhibits this osteoclastogenesis (OPG is secreted by osteoblasts, and binds to OPGL, thus inhibiting maturation of osteoclasts and osteoresorption). The degree and activity of osteoresorption depend mainly on the balance between OPG and its ligand (OPGL); factors increasing OPGL expression mostly reduce OPG expression and vice versa.

Recombinant his-tagged Human OCIF produced in *E. coli* cells is a single, non-glycosylated, polypeptide chain containing amino acids 201-401 and having a molecular mass of 31 kDa which includes a 4 kDa His-tag.

The OPG is purified by proprietary chromatographic techniques.

Selected References:

- Schoppet *et al.* (2007) Osteoprotegerin expression in dendritic cells increases with maturation and is NF-kappaB-dependent. *J Cell Biochem.* **100**:1430.
Petersson *et al.* (2005) Osteoprotegerin is expressed in colon carcinoma cells. *Anticancer Res.* **25**:3809.
Saidenberg *et al.* (2002) Osteoprotegerin and inflammation. *Eur Cytokine Netw.* **13**:144.