



Osteoprotegerin, human recombinant (rHuOPG)

Catalog No: 97597
Lot No: XXXXX
Source: *E. coli*
Synonyms: TNFRSF11B, OPG, OCIF, Osteoclastogenesis inhibitory factor, Osteoprotegerin, TR1, MGC29565

Background

Osteoprotegerin acts as decoy receptor for rankl and thereby neutralizes its function in osteoclastogenesis. OPG inhibits the activation of osteoclasts and promotes osteoclast apoptosis in vitro. Bone homeostasis seems to depend on the local rankl/opg ratio. Osteoprotegerin may also play a role in preventing arterial calcification. May act as decoy receptor for trail and protect against apoptosis. Trail binding blocks the inhibition of osteoclastogenesis.

Description

Osteoprotegerin human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 174 amino acids and having a molecular mass of 20 kDa. OPG is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

OPG was lyophilized from a 0.2 µm filtered concentrated (0.5 mg/ml) solution in PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized Osteoprotegerin in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Osteoprotegerin, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution OCIF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

METFPPKYLH YDEETSHQLL CDKCPPGTYL KQHCTAKWKT VCAPCPDHYY TDSWHTSDEC LYCSPVCKEL QYVKQECNRT
HNRVCECKEG RYLEIEFCLK HRSCPPGFGV VQAGTPERNV VCKRCPDGFV SNETSSKAPC RKHTNCSVFG LLLTQKGNAT
HDNICSGNSE STQK

Activity

The activity is determined by its ability to neutralize the stimulation of U937 cells treated with 10 ng/ml of soluble RANKL corresponding to a specific activity of 100,000 IU/mg.

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