



Osteoprotegerin, Yeast, human recombinant (rHuOPG)

Catalog No: 94902
Lot No: XXXXX
Source: *Pichia pastoris*
Synonyms: TNFRSF11B, OPG, OCIF, Osteoclastogenesis inhibitory factor, 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 yeast contains 412 amino acid residues, including 180 residues from mature OPG (22-201) and 232 residues from the Fc protein of human IgG1, and has a calculated molecular mass of 46.5 kDa. As a result of glycosylation, the recombinant Osteoprotegerin migrates as a 49 kDa protein in SDS-PAGE under reducing conditions. 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 90.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

ETFPPKYLHY DEETSHQLLC DKCPPGTYLK QHCTAKWKTV CAPCPDHYT DSWHTSDECL YCSPVCKELQ YVKQECNRTH
NRVCECKEGR YLEIEFCLKH RSCPPGFGVV QAGTPERNV CKRCPDGFSS NETSSKAPCR KHTNCSVFGV LLTQKGNATH
DNICSGNSES TQKCGIDVTL

FC232:

EPKSSDKTHT CPPCPAPEFE GAPSVFLFPP KPKDTLMISR TPEVTCVVVD VSHEDPEVKF NWYVDGVEVH NAKTKPREEQ
YNSTYRVVSV LTVLHQDWLN GKEYKCKVSN KALPTPIEKT ISKAKGQREP QVYTLPPSRD ELTKNQVSLT CLVKGFPYPSD
IAVEWESNGQ PENNYKTPPP VLDSGDGSFFL YSKLTVDKSR WQQGNVFSCS VMHEALHNHY TQKSLSLSPG K

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Activity

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

Usage

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