

Osteoprotegerin Human Pichia Pastoris

Product Data Sheet

Type: Recombinant	Cat. No.:	
Source: Pichia Pastoris	RP1762660050	(50 ug)
Species: Human	RP1762661000	(1 mg)
Other names: OPG, Osteoclastogenesis inhibitory factor, OCIF		

Description

Recombinant OPG produced in yeast contains 412 amino acid residues, including 180 residues from mature OPG (a.a 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. The OPG is purified by proprietary chromatographic techniques.

Introduction to the Molecule

Osteoprotegerin (OPG) or osteoclastogenesis inhibitory factor (OCIF) is a secretory glycoprotein belonging to TNF receptor superfamily. OPG consists of 401 amino acid residues, it has a molecular weight of 60 kDa as a monomer and 120 kDa as a disulfide-linked dimer and is produced in different tissues, e.g. bone, skin, liver, stomach, intestine and lung. Osteoprotegerin inhibits the recruitment, proliferation and activation of osteoclasts. Osteoclast formation activity may be monitored principally by determination of concentration ratio of osteoprotegerin ligand (OPGL)/OPG. Alteration of this ratio may be the cause of bone loss in many imbalances in bone metabolism such as osteoporosis, osteopetrosis, hypercalcemia, metastatic osteolytic lesions and rheumatic bone degradation.

Research topic

Bone and cartilage metabolism

Amino Acid Sequence

[OPG22-201](#) LHYDEETSHQ LLCDKCPPGT YLKQHCTAKW KTVCAPCPDH YYTDSWHTSD ECLYCSPVCK ELQYVKQECN RTHNRVCECK EGRYLEIEFC LKHRSCPPGF GVVQAGTPER NTVCKRCPDG FFSNETSSKA PCRKHTNCSV FGLLLTQKGN ATHDNICSGN SESTQKCGID VTL. [Fc232](#) DKTHTCPPCP APEFEGAPSV FLFPPKPKDT LMISRTPEVT CVVVDVSHED PEVKFNWYVD GVEVHNAKTK PREEQYNSTY RVVSVLTVLH QDWLNGKEYK CKVSNKALPT PIEKTISKAK GQREPQVYTL PPSRDELTKN QVSLTCLVKG FYPSDIAVEW ESNQGPPENNY KTTPPVLDSD GSFFLYSKLT VDKSRWQQGN VFSCSVMHEA LHNHYTQKSL SLSPGK.

Source

Pichia Pastoris

Purity

Greater than 90.0% as determined by

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Biological Activity

Determined by its ability to neutralize the stimulation of U937 cells treated with 10ng/ml of soluble RANKL (sRANKL).

Formulation

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

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

It is recommended to reconstitute the lyophilized Osteoprotegerin in sterile 18 M²-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

HEADQUARTERS:				
BioVendor Laboratorní medicína, a.s.	Karasek 1767/1	621 00 Brno CZECH REPUBLIC	Phone: +420-549-124-185 Fax: +420-549-211-460	E-mail: info@biovendor.com sales@biovendor.com Web: www.biovendor.com
AUSTRIA: BioVendor GesmbH	Nußdorfer Straße 20/10	1090 Vienna AUSTRIA	Phone: +43-1-89090-25 Fax: +43-1-89090-2515	E-mail: infoAustria@biovendor.com
GERMANY, SWITZERLAND: BioVendor GmbH	Otto-Hahn-Straße 16	34123 Kassel GERMANY	Phone: +49-6221-433-9100 Fax: +49-6221-433-9111	E-mail: infoEU@biovendor.com
USA, CANADA AND MEXICO: BioVendor LLC	128 Bingham Rd. Suite 1300	Asheville, NC 28806 USA	Phone: +1-828-575-9250 +1-800-404-7807 Fax: +1-828-575-9251	E-mail: infoUSA@biovendor.com