BioVendor - Laboratorní medicína a.s.
Karásek 1767/1
621 00 Brno

Date of issue: 08.11.2017

PRODUCT DATASHEET

Osteoprotegerin Human HEK293

Cat. No.: RD172003100
Type: Recombinant
Size: 0.1 mg
Source: HEK293
Species: Human

Description

Total 393 AA. MW: 45.0 kDa (calculated). UniProtKB acc. No. O00300 (Glu22–Leu401). N-terminal FLAG-tag (13 extra AA). Protein identity confirmed by LC-MS/MS.

Other names

OPG, Osteoclastogenesis inhibitory factor, OCIF, TNFRSF11B, Tumor Necrosis Factor Receptor Superfamily Member 11B

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

PGDYKDDDDKPAGETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCE

Purity

Purity as determined by densitometric image analysis: > 90 %

Endotoxin

< 1.0 EU/µg

Formulation:

Filtered (0.4 µm) and lyophilized in phosphate buffered saline pH 7.5 containing 5% (v/v) Trehalose.

Reconstituion:

Add deionized water to prepare a working stock solution of approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely.

Shipping

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

Storage, Stability/Shelf Life

Store lyophilized protein at –80°C. Lyophilized protein remains stable until the expiry date when stored at –80°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at –80°C for long term storage. Reconstituted protein can be stored at 4°C for a week.

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Phone: +420-549-124-185, Fax: +420-549-211-460
E-mail: info@biovendor.com, sales@biovendor.com
Web: www.biovendor.com
There are BioVendor branches and distributors near you.
To find the office closest to you, visit www.biovendor.com/contact

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Quality control

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

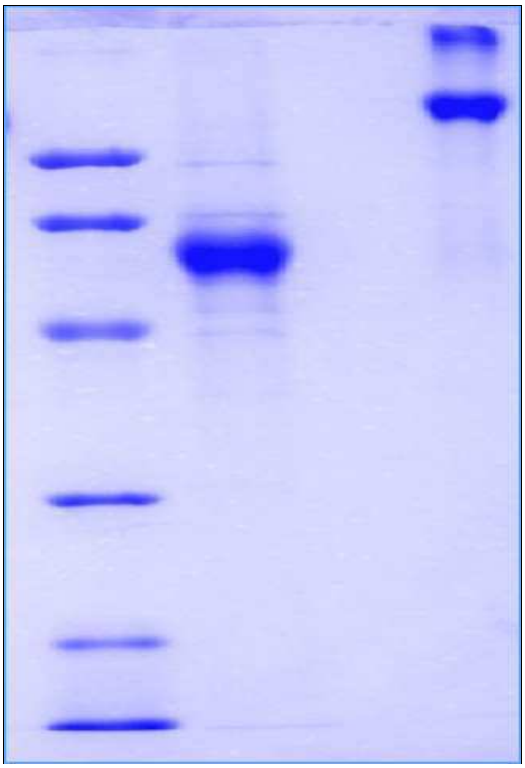
LAL to determine quantity of endotoxin.

Applications

ELISA, Western blotting

Note

This product is intended for research use only.



12 % SDS-PAGE separation of Human OPG:
1. M.W. marker – 14, 21, 31, 45, 66, 97 kDa
2. Reduced and boiled sample, 2.5 µg/lane
3. Non-reduced and non-boiled sample, 2.5 µg/lane

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