Osteoblast Specific Factor 1 Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: Pleiotrophin, PTN, Heparin-binding growth-associated molecule, HB-GAM, Heparin-binding growth factor 8, HBGF-8, OSF-1, Heparin-binding neurite outgrowth-promoting factor 1, HBNF-1, Heparin-binding brain mitogen, HBBM

Cat. No.:
RD172044100 (0.1 mg)

Description

Total 152 AA. MW: 17.3 kDa. UniProtKB acc.no. P21246. N-Terminal His-tag and thrombin cleavage site 16 AA (highlighted).

Introduction to the Molecule

Pleiotrophin (Osteoblast-Specific Factor-1, OSF-1) contains 136 amino acid residues. The sequence is very rich in cationic amino acids (24% of the residues); lysine cluster sequences are found in the N-terminal and C-terminal ends of the structure. The OSF-1 gene was shown by Northern blotting analysis to be expressed in mouse calvarial osteoblast-enriched cells and in mouse brain tissues, but not in thymus, spleen, kidney, liver, lung, testis or heart.
Pliotrophin has the ability to promote adhesion, migration, expansion, and differentiation of human osteoprogenitor cells. In addition to certain types of cancer, the embryonic growth and differentiation factor pleiotrophin is found also in adults in inflammatory diseases. In osteoarthritis, pleiotrophin is especially expressed in early stages, and its concentrations in the synovial fluid could serve as a marker for the progress of the disease. Pleitrophin might be involved in cartilage repair in osteoarthritis, in particular, in earlier stages.

Research topic

Bone and cartilage metabolism, Cytokines and chemokines and related molecules

Amino Acid Sequence

MKHHHHHHHM LVPRGSGKKE KPEKKVKKSD CGEWQWSVCV PTSGDCGLGT REGTRTGAEC KQTMKTQRCK IPCNWKKQFG AECKYQFQAW GECDLNTALK TRTGSLKRAL HNAECQKTVT ISKPCGKLTK PKPQAESKKK KKEGKKQEKM LD

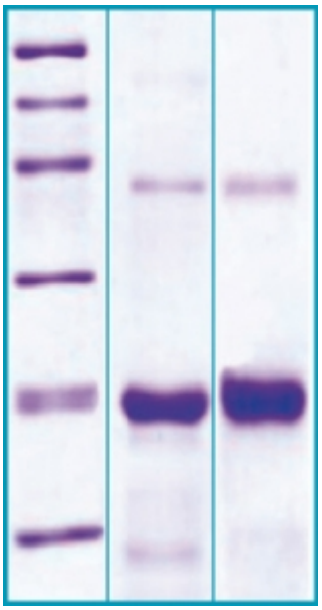
Source

E. coli

Purity

>95%

SDS-PAGE gel



12% SDS-PAGE separation of Human OSF-1
1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa
2. reduced and heated sample, 10µg/lane
3. non-reduced and non-heated sample, 10µg/lane

Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 0.1 M phosphate buffer, 0.1 M NaCl, pH 7.2

Reconstitution

Add PBS pH 7.2 to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

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

Storage, Stability/Shelf Life

Store lyophilized protein at -20°C. Lyophilized protein remains stable until the expiry date when stored at -20°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 limited period of time; it does not show any change after one week at 4°C.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.

Applications

ELISA, Western blotting

Note

This product is intended for research use only.

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