



## Pleiotrophin, His Tag, human recombinant (rHuPleiotrophin-His)

**Catalog No:** 94984  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** PTN, Heparin Affin Regulatory Protein, HARP, Heparin-binding growth factor-8, HBGF-8, Osteoblast-Specific Factor-1, OSF-1, Heparin-binding growth-associated molecule, HB-GAM, HBNF-1 Heparin-binding brain mitogen, Heparin-binding neurite outgrowth-promoting factor 1, HBBM, NEGF1

### Background

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. Pleiotrophin 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. Pleiotrophin might be involved in cartilage repair in osteoarthritis, in particular, in earlier stages.

### Description

Pleiotrophin human recombinant produced in *E. coli* is a 17.3 kDa protein containing 136 amino acids of human OSF-1 and additional 16 amino acids His Tag. The amino acid sequence of the recombinant Pleiotrophin is 100% homologous to the amino acid sequence of human OSF-1 without signal sequence. Pleiotrophin is purified by three-step procedure using affinity Ni-NTA chromatography and size exclusion chromatography before and after refolding.

### Physical Appearance

Sterile filtered and lyophilized.

### Formulation

Sterile filtered and lyophilized from 0.5 mg/ml in 0.1 M phosphate buffer and 0.1 M NaCl, pH 7.2.

### Solubility

Add 0.2 ml of PBS pH 7.2 and let the lyophilized pellet dissolve completely.

### Stability

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.

### Purity

Greater than 95% as determined by SDS-PAGE.

### Amino Acid Sequence

MKHHHHHHHM LVPRGSGKKE KPEKKVKKSD CGEWQWSVCV PTSGDCGLGT REGTRTGAEC KQTMKTQRCK IPCNWKQFG  
AECKYQFQAW GECDLNTALK TRTGSLKRAL HNAECQKTVT ISKPCGKLTG PKPQAESKKE KKEGKKQEKM LD

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### Applications

WB\*ELISA

### Usage

**This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.**

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