

## Recombinant Human Pleiotrophin, His-tagged

Cat. No. PTN-131H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** *E. coli*, its molecular weight is 17.3 kDa protein containing 136 amino acid residues of the OSF-1 human and 16 additional amino acid residues-His-Tag, thrombin cleavage site (underlined).

**Species** Human

**Source** E.coli

**Description** 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.

**Amino Acid Sequence** MKHHHHHHHM LVPRGSGKKE KPEKKVKKSD CGEWQWSVCV PTSGDCGLGTR EGTRTGAECKQTMKT QRCKIPC�WK KQFGAECKYQF QAWGECDLNTALK TRTG SLKRALHNAECQK TVTISKPCGKLTCPK PQAESKKKKKE GKKQEKMLD.

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<b>Purity</b>	>95% (SDS-PAGE analyzed).
<b>Purification method</b>	Three-step procedure using affinity Ni-NTA chromatography and size exclusion chromatography before and after refolding.
<b>Formulation</b>	Sterile filtered and lyophilized from 0.5 mg/ml in 0.1 M phosphate buffer and 0.1 M NaCl, pH 7.2.
<b>Specificity</b>	The amino acid sequence of the Pleiotrophin human recombinant is 100% homologous to the amino acid sequence of the OSF-1 human without signal sequence.
<b>Reconstitution</b>	Add 0.2 ml of PBS pH 7.2 and let the lyophilized pellet dissolve completely.
<b>Stability/Shelf Life</b>	The lyophilized protein remains stable until the expiry date when stored at -20°C.
<b>Applications</b>	Western blotting, ELISA.
<b>Storage</b>	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.

## GENE INFORMATION

<b>Gene Name</b>	PTN pleiotrophin [ <i>Homo sapiens</i> ]
<b>Synonyms</b>	PTN; pleiotrophin; HARP; HBNF; HBGF8; NEGF1; PTN;Heparin-binding growth-associated molecule; HB-GAM; Heparin-binding growth factor 8;Osteoblast-specific factor 1;OSF-1; Heparin-binding neurite outgrowth-promoting factor 1; HBNF-1; Heparin-binding brain mitogen; HBBM; HBGF-8; HBNF1; heparin affin regulatory protein; heparin binding growth factor 8; neuritegrowth-promoting factor 1

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<b>Gene ID</b>	5764
<b>mRNA Refseq</b>	NM_002825
<b>Protein Refseq</b>	NP_002816
<b>UniProt ID</b>	P21246
<b>Chromosome Location</b>	7q33-q34
<b>MIM</b>	162095
<b>Function</b>	growth factor activity; heparin binding; phosphoprotein phosphatase inhibitor activity

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