

## Recombinant Human Pleiotrophin (Human PTN)

### Product Information

Product Name	Cat#	Size
Recombinant Human Pleiotrophin (Human PTN)	92523ES08	5 µg
	92523ES60	100 µg
	92523ES76	500 µg

### Product Description

PTN was identified independently by several groups as a novel heparin-binding, developmentally regulated cytokine. Depending on the biological activities studied, this protein has variously been referred to as heparin-binding brain mitogen (HBBM), heparin-binding growth factor-8 (HBGF-8), heparin-binding neurite promoting factor, heparin-binding neurotrophic factor (HBNF), heparin-affinity regulatory peptide (HARP), heparin-binding growth-associated molecule (HB-GAM), osteoblast-specific factor (OSF-1), and pleiotrophin. PTN is a highly conserved protein; the amino acid sequences of human, bovine, rat, and mouse PTN share > 98% homology. PTN is a member of a family of heparin-binding proteins that share sequence, structural, and functional similarity. Other members of this family include midkine (MK), and chicken retinoic acid-induced heparin-binding protein (RI-HB), an avian homologue of MK. The expression of all these cytokines is restricted and highly regulated during development. PTN can be used as an attachment substrate to stimulate neurite outgrowth in mixed cultures of embryonic rat, mouse or chicken brain cells. Although both natural and recombinant human PTN have been reported to be mitogenic for fibroblasts, endothelial, and epithelial cells, the data are still highly controversial.

### Product Properties

<b>Synonyms</b>	HARP; HBBM; HB-GAM; HBGF8; HBNF
<b>Accession</b>	P21246
<b>GeneID</b>	5764
<b>Source</b>	E.coli-derived Human PTN, Gly33-Asp168.
<b>Molecular Weight</b>	Approximately 15.3 kDa.
<b>AA Sequence</b>	GKKEKPEKKV KKSDCGEWQW SVCVPTSGDC GLGTREGTRT GAECKQTMKT QRCKIPC�WK KQFGAECYQ FQAWGECNLN TALKTRTGSL KRALHNAECQ KTVTISKPCG KLTKPKPQAE SKKKKKEGKK QEKMLD
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 96 % by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	The biological activity was measured by its ability to enhance neurite outgrowth of E16-E18 rat embryonic cortical neurons, when neurons were plated on 96 well culture plates that had been pre-coated with 100 µl/well of a solution of 5-10 µg/mL rHuPTN. Fully biologically active when compared to standard.
<b>Endotoxin</b>	< 0.1 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

## **Shipping and Storage**

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

## **Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!