

Pleiotrophin/PTN Active Protein | PTN active protein

Pleiotrophin/PTN Protein, Human, Recombinant

CATALOG #
AAA257864

HOST
Baculovirus-Insect Cells

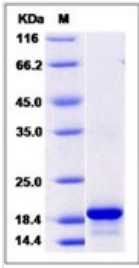
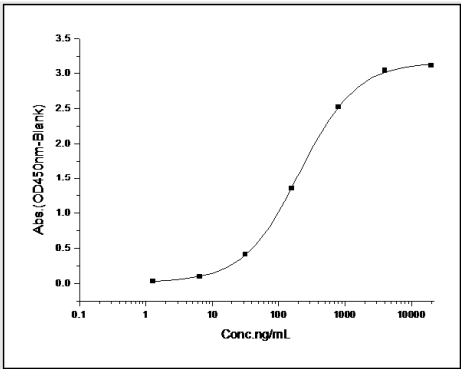
PRODUCT SYNONYMS

Pleiotrophin/PTN; Pleiotrophin/PTN Protein; Human; Recombinant; Human Pleiotrophin/PTN/HB-GAM Protein; HARP Protein; HBGF8 Protein; HBNF Protein; NEGF1 Protein; pleiotrophin; PTN active protein

PRODUCT SPECIFICATIONS

Host	Baculovirus-Insect Cells
Purity/Purification	>90% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile 20mM Tris, 1M NaCl, pH8.0. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Met1-Asp16 8
Species	Human
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Met
Tag	Native
Protein Construction	A DNA sequence encoding the mature form of human PTN (NP_002816.1)(Met1-Asp168) was expressed.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Activity	Measured by its binding ability in a functional ELISA. Immobilized human PTN at 10ug/ml (100uL/well) can bind rat SDC1-Fc. The EC50 of rat SDC1-Fc is 0.35-0.81ug/ml.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.

IMAGES



SDS-PAGE

Application Data
Measured by its binding ability in a functional ELISA. Immobilized human PTN at 10 ug/ml (100 ul/well) can bind rat SDC1-Fc, The EC50 of rat SDC1-Fc is 0.35-0.81 ug/ml.

ADDITIONAL INFORMATION

Related Product Information for PTN active protein	Background: HB-GAM belongs to the pleiotrophin family. During embryonic and early postnatal development, HB-GAM is expressed in the central and peripheral nervous system and also in several non-neural tissues, notably lung, kidney, gut and bone. While in the adult central nervous system, it is expressed in an activity-dependent manner in the hippocampus where it can suppress long term potentiation induction. HB-GAM has a low expression in other areas of the adult brain, but it can be induced by ischemic insults, or targeted neuronal damage in the entorhinal cortex or in the substantia nigra pars compacta. It is structurally related to midkine and retinoic acid induced heparin-binding protein and has a high affinity for heparin. HB-GAM binds anaplastic lymphoma kinase (ALK) which induces MAPK pathway activation, an important step in the anti-apoptotic signaling of PTN and regulation of cell proliferation. It also functions as a secreted growth factor and induces neurite outgrowth and which is mitogenic for fibroblasts, epithelial, and endothelial cells.
References	Vanderwinden JM, et al. (1992) Cellular distribution of the new growth factor pleiotrophin (HB-GAM) mRNA in developing and adult rat tissues. Anat Embryol. 186(4):387-406.Lauri SE, et al. (1996) Activity-induced enhancement of HB-GAM expression in rat hippocampal slices. Neuroreport. 7(10):1670-4.Pavlov I, et al. (2002) Role of heparin-binding growth-associated molecule (HB-GAM) in hippocampal LTP and spatial learning revealed by studies on overexpressing and knockout mice. Mol Cell Neurosci. 20(2):330-42.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4506281
NCBI GeneID	5764
NCBI Accession #	NP_002816.1
NCBI GenBank Nucleotide #	NM_002825.5
UniProt Accession #	P21246; Q5U0B0; Q6ICQ5; Q9UCC6
Molecular Weight	18,942 Da
NCBI Official Full Name	pleiotrophin
NCBI Official Synonym Full Names	pleiotrophin
NCBI Official Symbol	PTN
NCBI Official Synonym Symbols	HARP; HBNF; HBGF8; NRGF1
NCBI Protein Information	pleiotrophin; HBBM; OSF-1; HB-GAM; HBGF-8; HBNF-1; osteoblast-specific factor 1; heparin-binding brain mitogen; heparin binding growth factor 8; heparin-binding growth factor 8; heparin affin regulatory protein; neurite growth-promoting factor 1; heparin-
UniProt Protein Name	Pleiotrophin

UniProt Gene Name	PTN
UniProt Synonym Gene Names	HBNF1; NEGF1; PTN; HBBM; HBGF-8; HB-GAM; HBNF-1; OSF-1
UniProt Entry Name	PTN_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/baculovirus-active-protein/pleiotrophin-ptn/257864>