10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PTN Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP12263b

Specification

PTN Antibody (C-term) Blocking peptide - Product Information

Primary Accession P21246

PTN Antibody (C-term) Blocking peptide - Additional Information

Gene ID 5764

Other Names
Pleiotrophin, PTN, Heparin-binding brain mitogen, HBBM, Heparin-binding growth factor 8, HBGF-8, Heparin-binding growth-associated molecule, HB-GAM, Heparin-binding neurite outgrowth-promoting factor 1, HBNF-1, Osteoblast-specific factor 1, OSF-1, PTN, HBNF1, NEGF1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PTN Antibody (C-term) Blocking peptide - Protein Information

Name PTN (HGNC:9630)

Synonyms HBNF1, NEGF1

Function
Secreted growth factor that mediates its signal through cell- surface proteoglycan and non-proteoglycan receptors (PubMed:16814777, PubMed:11278720, PubMed:19141530). Binds cell-surface proteoglycan receptor via their chondroitin sulfate (CS) groups (PubMed:26896299, PubMed:27445335). Thereby regulates many processes like cell proliferation, cell survival, cell growth, cell differentiation and cell migration in several tissues namely neuron and bone (PubMed:1733956, PubMed:1768439, PubMed:11278720, PubMed:19141530, PubMed:<a href="http://www.uniprot.org/citations/27445335"

target="_blank">27445335, PubMed:30667096, PubMed:19442624). Also plays a role in synaptic plasticity and learning-related behavior by inhibiting long-term synaptic potentiation (By similarity). Binds PTPRZ1, leading to neutralization of the negative charges of the CS chains of PTPRZ1, inducing PTPRZ1 clustering, thereby causing the dimerization and inactivation of its phosphatase activity leading to increased tyrosine phosphorylation of each of the PTPRZ1 substrates like ALK, CTNNB1 or AFAP1L2 in order to activate the PI3K-AKT pathway (PubMed:17681947, PubMed:27445335, PubMed:30667096, PubMed:16814777, PubMed:10706604). Through PTPRZ1 binding controls oligodendrocyte precursor cell differentiation by enhancing the phosphorylation of AFAP1L2 in order to activate the PI3K-AKT pathway (PubMed:27445335, PubMed:30667096). Forms a complex with PTPRZ1 and integrin alpha-V/beta-3 (ITGAV:ITGB3) that stimulates endothelial cell migration through SRC dephosphorylation and activation that consequently leads to ITGB3 'Tyr-773' phosphorylation (PubMed:19141530). In adult hippocampus promotes dendritic arborization, spine development, and functional integration and connectivity of newborn granule neurons through ALK by activating AKT signaling pathway (By similarity). Binds GPC2 and chondroitin sulfate proteoglycans (CSPGs) at the neuron surface, leading to abrogation of binding between PTPRS and CSPGs and neurite outgrowth promotion (By similarity). Binds SDC3 and mediates bone formation by recruiting and attaching osteoblasts/osteoblast precursors to the sites for new bone deposition (By similarity). Binds ALK and promotes cell survival and cell proliferation through MAPK pathway activation (PubMed:11278720). Inhibits proliferation and enhances differentiation of neural stem cells by inhibiting FGF2-induced fibroblast growth factor receptor signaling pathway (By similarity). Mediates regulatory mechanisms in normal hemostasis and in hematopoietic regeneration and in maintaining the balance of myeloid and lymphoid regeneration (By similarity). In addition may play a role in the female reproductive system, auditory response and the progesterone-induced decidualization pathway (By similarity).

Cellular Location
Secreted

Tissue Location
Osteoblast and brain..

PTN Antibody (C-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

PTN Antibody (C-term) Blocking peptide - Images

PTN Antibody (C-term) Blocking peptide - Background

PTN ia a heparin binding mitogenic protein. It has neurite extension activity.

PTN Antibody (C-term) Blocking peptide - References

Li, F., et al. J. Biol. Chem. 285(36):27673-27685(2010)Dos Santos, C., et al. Int. J. Cancer 127(5):1038-1051(2010)Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Svensson, S.L., et al. J. Biol. Chem. 285(21):16105-16115(2010)M'Bika, J.P., et al. J. Gen. Virol. 91 (PT 5), 1346-1353 (2010)

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

: