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Anti-Pleiotrophin Antibody

Catalog # ABO10736

Specification

Anti-Pleiotrophin Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P21246
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Pleiotrophin(PTN) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Pleiotrophin Antibody - 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

Calculated MW
18942 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization
Secreted.

Tissue Specificity
Osteoblast and brain.

Protein Name
Pleiotrophin(PTN)

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human Pleiotrophin(150-168aa QAESKKKKKEGKKQEKMLD), identical to the related rat and mouse

sequences.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the pleiotrophin family.

Anti-Pleiotrophin Antibody - 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:11278720, PubMed:16814777, 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:11278720, PubMed:1733956, PubMed:1768439, PubMed:19141530, PubMed:19442624, PubMed:27445335, PubMed:30667096). 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:10706604, PubMed:16814777, PubMed:17681947, PubMed:27445335, PubMed:30667096). 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

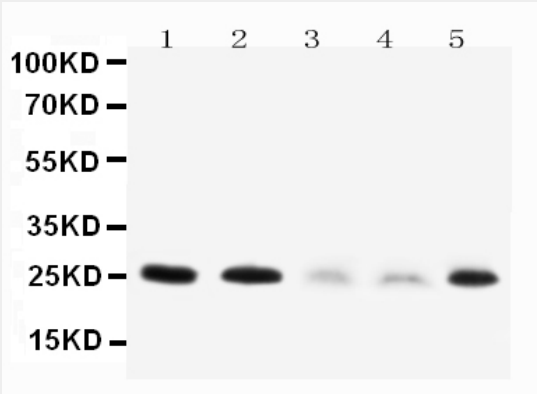
Tissue Location
Osteoblast and brain..

Anti-Pleiotrophin Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Pleiotrophin Antibody - Images



Anti-Pleiotrophin antibody, ABO10736, Western blottingLane 1: Rat Brain Tissue LysateLane 2: Rat Kidney Tissue LysateLane 3: MCF-7 Cell LysateLane 4: HT1080 Cell LysateLane 5: SMMC Cell Lysate

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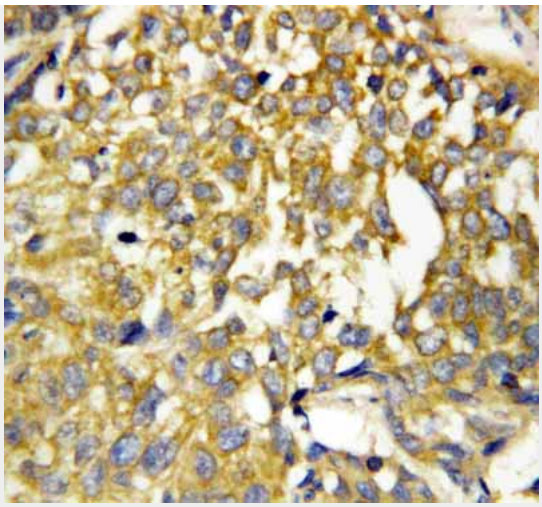

Anti-Pleiotrophin antibody, ABO10736, IHC(P)IHC(P): Human Mammary Cancer Tissue

Anti-Pleiotrophin Antibody - Background

Pleiotrophin(PTN) also known as heparin-binding brain mitogen(HBBM) or heparin-binding growth factor 8(HBGF-8) or neurite growth-promoting factor 1(NEGF1) or heparin affinity regulatory peptide(HARP) or heparin binding growth associated molecule(HB-GAM) is a protein that in humans is encoded by the PTN gene. PTN is the first member of a family of developmentally regulated cytokines. The PTN gene is mapped to 7q33-q34. A mutant PTN that contained only the first N-terminal 40 amino acids was a dominant negative. Pleiotrophin is expressed in the central and peripheral nervous system and also in several non-neural tissues, notably lung, kidney, gut and bone. Pleiotrophin binds to cell-surface nucleolin as a low affinity receptor. This binding can inhibit HIV infection.