

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Pleiotrophin/PTN in direct ELISAs and Western blots. In direct ELISAs, less than 50% cross-reactivity with recombinant mouse PTN is observed, and less than 1% cross-reactivity with recombinant human Midkine is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Pleiotrophin/PTN Gly33-Asp168 Accession # P21246
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

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. PTN has been shown to transform NIH-3T3 and SW-13 cells, as evidenced by anchorage-independent growth and tumor formation in the nude mouse. These results suggest that, in spite of the conflicting reports of PTN's growth-promoting activity *in vitro*, PTN may have a role in abnormal cell growth *in vivo*.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.