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hPleiotrophin Protein
Human Pleiotrophin, Recombinant,E. coli
Catalog # PG10036

Specification

hPleiotrophin Protein - Product Information

hPleiotrophin Protein - Additional Information

Storage
-20°C

Precautions
hPleiotrophin Protein is for research use only and not for use in diagnostic or therapeutic procedures.

hPleiotrophin Protein - 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

hPleiotrophin Protein - Images

hPleiotrophin Protein - Background

Pleiotrophin (PTN), is a heparin-binding neurotrophic factor. Cells that express either PTN or PTN mRNA include osteoblasts, fetal chondrocytes,1 astrocytes, oligodendroglia, neurons,2 Schwann cells,3 keratinocytes of the stratum basale,3 and selected tumor cell lines.4,5 The expression of PTN increases during the process of brain embryogenesis and reaches maximum levels at time of birth. The role of PTN in neurogenesis and neural plasticity has been revealed by various studies. Embryonic cortical neurons adhere to and extend neurites on PTN coated substratum.6 PTN also induces, in vitro, migration of osteoblasts. 7 PTN coated membrane enhances neuronal migration by haptotaxis.8 PTN bound to agarose beads induces clustering of acetylcholine receptors on embryonic myoblasts.9 PTN is expressed in the CA1 region of rat hippocampus in an activity-dependent manner, and is suggested to be involved in the regulation of synaptic plasticity in the hippocampus.10 Transfection with PTN cDNA, transforms murine 3T3 fibroblasts into cells that form extensively metastasizing tumors in nude mice.11 PTN is highly expressed in choriocarcinoma, melanoma and, prostate carcinoma. Serum PTN increase in patients with pancreatic and colon carcinomas.12 After focal forebrain ischemia, PTN is expressed in astrocytes, OX-42 positive macrophages, and endothelial cells in areas of developing neovascularization.13 PTN is also deposited in senile plaques in Alzheimer's disease and Down's

syndrome.14

hPleiotrophin Protein - References

1 . Garver, R.I.et al.(1994)Cancer74,1584.2 . Nakagawara, A.et al.(1995)Cancer Res. 55,1792.3 . Kuo, M.D.et al.(1992)Biochem. Biophys. Res. Commun. 182,188.4 . Raulo, E.et al.(1994)J. Biol. Chem. 269,12999.5 . Mitsiadis, T.A. et al.(1995)Development121,37.6 . Rauvala, H.(1989)EMBO. J. 8,2933.7 . Imai, S.et al.(1998)J. Cell Biol. 143,1113.8 . Maeda, N. et al.(1998)J. Cell Biol. 142,203.9 . Peng, H.B.et al.(1995)J. Neurosci. 15,3027.10 . Lauri, S.E. et al.(1998)Eur. J. Neurosci. 10,188.11 . Chauhan, A.K.et al.(1993)Proc. Natl. Acad. Sci. USA 90,679.12 . Souttou, B.et al.(1998)J. Natl. Cancer Inst. 90,1468.13 . Yeh, H.J.et al.(1998)J. Neurosci. 18,3699.14 . Wisniewski, T.et al.(1996)Neuroreport7,667.