



Recombinant Protein Technical Manual

Recombinant Human Pleiotrophin/PTN/HB-GAM Protein (Active)

RPES4776

Product Data:

Product SKU: RPES4776

Size: 5µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: NP_002816.1

Protein Information:

Molecular Mass: 15.3 kDa

AP Molecular Mass: 19 kDa

Tag:

Bio-activity: Measured by its binding ability in a functional ELISA. Immobilized human PTN at 10 µg/ml (100 µl/well) can bind rat SDC1-Fc, The EC50 of rat SDC1-Fc is 0.35-0.81 µg/ml.

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile 20mM Tris, 1M NaCl, pH 8.0

Reconstitution: Please refer to the printed manual for detailed information.

Application: Functional ELISA

Synonyms: HARP;HBGF8;HBNF;NEGF1

Immunogen Information:

Sequence: Met 1-Asp168

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 damaged 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.