Recombinant Mouse Pleiotrophin/PTN/HB-GAM Protein

Catalog Number: PKSM040395



Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description	
Synonyms	Pleiotrophin;PTN;Heparin-binding brain mitogen;HBBM;Heparin-binding growth factor 8;HBGF-8;Osteoblast-specific factor 1;OSF-1;HARP;HB-GAM;HBBN;HBNF;OSF;Osf-1;Osf1
Species	Mouse
Expression Host	Baculovirus-Insect Cells
Sequence	Met1-Asp168
Accession	P63089
Calculated Molecular Weight	15.3 kDa
Observed molecular weight	20 kDa
Tag	None
Bioactivity	Immobilized mouse PTN at 10 μ g/ml (100 μ l/well) can bind rat SDC1-Fc, The EC50 of rat SDC1-Fc is 0.4-1. 1 μ g/ml.
Properties	
Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μ g of the protein as determined by the LAL method.
Storage	Generally, 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 20 mM Tris, 1M NaCl, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.
Data	

Data

KDa	М
116	_
66.2	
45.0	-
35.0	
25.0	-
18.4	
14.4	-

> 95 % as determined by reducing SDS-PAGE.

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

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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.

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