Data Sheet (Cat.No.TMPY-01412)

TargetMol

Glypican 5 Protein, Human, Recombinant (His)

General Information

Synonyms:	glypican 5
Protein Construction:	A DNA sequence encoding the human GPC5 (NP_004457.1) (Met 1-Thr 554) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Glu 25
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P78333
Molecular Weight:	60.5 kDa (predicted); 60.5 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized human GPC5 at 5 μg/ml (100 μl/well) can bind human bFGF with a linear range of 0.156-2.5 ng/ml.
Purity:	> 92 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

Glypican-5 (GPC5), is a cell membrane protein that belongs to the glypican family. The glypicans compose a family of glycosylphosphatidylinositol-anchored heparan sulfate proteoglycans that may play a role in the control of cell division and growth regulation. So far, six members (Glypican-1/GPC1, Glypican-2/GPC2, Glypican-3/GPC3, Glypican-4/GPC4, Glypican-5/GPC5, Glypican-6/GPC6) of this family are known in the vertebrates. In the adult, Glypican-5 is primarily expressed in the brain. It is also detected in the fetal brain, lung, and liver. Glypican-5

enhances the intracellular signaling of FGF2 and HGF. It alters the cellular distribution of FGF2. The properties of Glypican-5 make it an attractive target for therapeutic intervention in rhabdomyosarcomas and other tumors that amplify and/or overexpress its gene. Glypican-5 is overexpressed in lymphoma cell lines that had shown amplification. It is a likely target for amplification, and that over-expression of GPC5 may contribute to the development and/or progression of lymphomas and other tumors.

Reference

Yu W,et al.(2003) GPC5 is a possible target for the 13q31-q32 amplification detected in lymphoma cell lines. J Hum Genet. 48(6): 331-5.

Williamson D,et al.(2007) Role for amplification and expression of glypican-5 in rhabdomyosarcoma. Cancer Res. 67(1): 57-65.

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