

Glypican 3/GPC3 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	DGSX;SDYS;GTR2-2;SGBS;Glypican 3;OCI-5;SGBS1;SGB;MXR7
Protein Construction:	Gln25-His559
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P51654-1
Molecular Weight:	63.6 kDa (predicted); Due to glycosylation, the protein migrates to 42 kDa, 68-80 kDa based on Bis-Tris PAGE result.

QC Testing

Biological Activity:	Immobilized TMPY-06877 at 1µg/ml (100µl/well) on the streptavidin precoated plate (5µg/ml). Dose response curve for Anti-GPC3 Antibody, hFc Tag with the EC50 of 6.4ng/ml determined by ELISA (QC Test).
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.

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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Glypican-3, also known as Intestinal protein OCI-5, GPC3, and OCI5, is a member of the glypican family. It belongs to the glypican family and is highly expressed in the lung, liver, and kidney. It is a heparan sulfate proteoglycan, which is overexpressed in various neoplasms such as hepatocellular carcinoma, malignant melanoma, and testicular yolk sac tumor, and plays an important role in cell growth and differentiation. GPC3 function is tissue-dependent. In some tissues, GPC3 acts as a tumor suppressor gene, whereas in others, it acts as an oncofetal

protein. Studies have shown that GPC3 is a reliable marker for hepatocellular carcinoma. The sensitivity and specificity exceed both alpha-fetoprotein and hepatocyte-paraffin1. GPC3 immunohistochemistry can aid in the differentiation of testicular germ cell tumors, being expressed in all yolk sac tumors but not in seminomas. GPC3 expression has also been identified in some squamous cell carcinomas of the lung and clear cell carcinomas of the ovary. The role of GPC3 in melanomas is still controversial. Thus, Glypican-3 is currently regarded as a tumor marker and potential target for immunotherapy. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

Kandil DH, et al. (2009) Glypican-3: a novel diagnostic marker for hepatocellular carcinoma and more. Adv Anat Pathol. 16(2): 125-9.

Maeda D, et al. (2009) Glypican-3 expression in clear cell adenocarcinoma of the ovary. Mod Pathol. 22(6): 824-32.

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