# Data Sheet (Cat.No.TMPY-00502)

TargetMol

## Glypican 3/GPC3 Protein, Mouse, Recombinant (His)

### General Information

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| Synonyms: | OCI-5;glypican 3 |
| Protein Construction: | A DNA sequence encoding the mouse GPC3 (NP_057906.2) (Met1-Pro558) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Gln 25 |
| Species: | Mouse |
| Expression Host: | Baculovirus Insect Cells |
| Accession: | Q3TWB2 |
| Molecular Weight: | 62 kDa (predicted); 62 kDa (reducing conditions) |

### QC Testing

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| Biological Activity: | Immobilized Recombinant Human bFGF/FGF2 Protein at 2 μg/ml (100 μl/well) can bind Recombinant Mouse Glypican 3/GPC3/OCI-5 Protein (His Tag) (Cat#TMPY-00502), the EC50 is 7-21 ng/mL. |
| Purity: | > 95 % 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 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 7.4. 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:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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 ImmunotherapyImmune CheckpointImmunotherapyTargeted 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.