Technical Data Sheet

InVivoMAb anti-human GPC3

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

Lot Specific Information

Lot Number: **Lot Specific***
Volume: **Lot Specific***
Concentration: **Lot Specific* (generally 4 to 11 mg/ml) ***
Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number:	**BE0404**
Clone:	**YP7**
Isotype:	Mouse IgG1, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG1 isotype control, unknown specificity
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Reported Applications:	*in vitro* photoimmunotherapy *in vivo* anti-tumor activity *in vivo* imaging *in vivo* photoimmunotherapy Flow cytometry Immunohistochemistry (paraffin) Immunofluorescence Western blot Immunoprecipitation ELISA
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤1EU/mg (≤0.001EU/μg) Determined by LAL gel clotting assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 μm filtered
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein G
Molecular Weight:	150 kDa

Description

The YP7 monoclonal antibody reacts with the C-lobe (within amino acids 521–530) of cell surface-associated glypican-3 (GPC3), also called GTR2-2, intestinal protein OCI-5, and MXR7. GPC3 is an oncofetal heparan sulfate proteoglycan, and its C-terminal domain attaches to the cell membrane through a glycophosphatidylinositol anchor. The 70-kDa precursor GPC3 protein is cleaved by furin to produce an N-terminal 40-kDa protein and a membrane-bound C-terminal 30-kDa protein. The GPC3 protein is prominently upregulated in hepatocellular carcinoma (HCC) tissues. The expression of GPC3, however, is highly heterogeneous, and it is expressed at relatively low levels in other cancers such as ovarian clear cell carcinoma and melanoma. The elevated expression of GPC3 in HCC triggers Wnt/β-catenin activation (a hallmark of cancer), thereby promoting cancer cell proliferation, invasion, and metastasis. Because of the cancer-specific expression of GPC3, this glycoprotein is an appealing HCC immunotherapy target, and the in vivo experimental outcomes have been promising with GPC3-targeting bispecific antibodies, CAR T cells, and ADC immunotherapies. Among the GPC3 antibodies developed so far, the YP7 monoclonal antibody has been found to be more specific for HCC-overexpressed

GPC3, and this antibody does not bind normal tissues or other forms of primary liver cancers (e.g., cholangiocarcinoma). The YP7 monoclonal antibody and its humanized version, hYP7, have been documented for antitumor activity in in vivo HCC xenograft models. When conjugated to the photosensitizing phthalocyanine dye IR700 (i.e., IR700-YP7) and exposed to near-infrared light, the YP7 antibody showed an antitumor effect in vivo in photoimmunotherapy experiments involving GPC3-positive tumor-bearing mice.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**
It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/be0404?bxcs=9k1b3a#tab_references or scan the QR code below.

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

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