

36-2391: Anti-Glypican-3 (GPC3) (Hepatocellular Carcinoma Marker) Monoclonal Antibody(Clone: rGPC3/863)

Clonality :	Monoclonal
Clone Name :	rGPC3/863
Application :	FACS,IF,IHC
Reactivity :	Human, Rat
Gene :	GPC3
Gene ID :	2719
Uniprot ID :	P51654
Alternative Name :	DGSX; Glypican proteoglycan 3; GPC3; GTR2-2; Heparan sulphate proteoglycan; Intestinal protein OCI-5; MXR7; OCI-5; SDYS; Secreted glypican-3; SGBS1
Isotype :	Mouse IgG1, kappa
Immunogen Information :	Recombinant full-length human GPC3 protein

Description

Glypican-3 (GPC3) is a glycosylphosphatidyl inositol-anchored membrane protein, which may also be found in a secreted form. Anti-GPC3 has been identified as a useful tumor marker for the diagnosis of hepatocellular carcinoma (HCC), hepatoblastoma, melanoma, testicular germ cell tumors, and Wilm's tumor. In patients with HCC, GPC3 is overexpressed in neoplastic liver tissue and elevated in serum, but is undetectable in normal liver, benign liver, and the serum of healthy donors. GPC3 expression is also found to be higher in HCC liver tissue than in cirrhotic liver or liver with focal lesions such as dysplastic nodules and areas of hepatic adenoma (HA) with malignant transformation. In the context of testicular germ cell tumors, GPC3 expression is up regulated in certain histologic subtypes, specifically yolk sac tumors and choriocarcinoma. A high level of GPC3 expression is also found in some types of embryonal tumors, such as Wilm's tumor and hepatoblastoma, with a low or undetectable expression in normal adjacent tissue. In patients with thyroid cancer, expression of GPC3 is dramatically enhanced in certain types of cancers: 100% in follicular carcinoma and 70% in papillary carcinoma. Expression of GPC3 in follicular carcinoma is significantly higher than that of follicular adenoma. In contrast, GPC3 is not expressed in anaplastic carcinoma.

Product Info

Amount :	20 µg / 100 µg
Content :	200 µg/ml of recombinant MAb Purified by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage condition :	Antibody with azide - store at 2 to 8°C. Antibody without azide - store at -20 to -80°C. Antibody is stable for 24 months. Non-hazardous.

Application Note

Flow Cytometry (1-2ug/million cells); Immunofluorescence (1-2ug/ml); Immunohistochemistry (Formalin-fixed) (1-2ug/ml for 30 minutes at RT)(Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes);

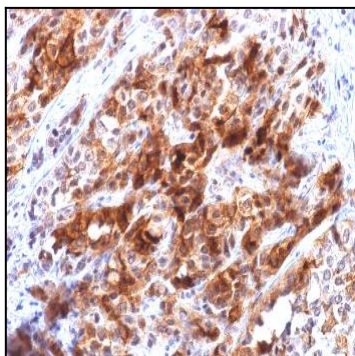


Fig. 1: Formalin-fixed, paraffin-embedded human Hepatocellular Carcinoma stained with Glypican-3 Mouse Recombinant Monoclonal Ab (rGPC3/863).

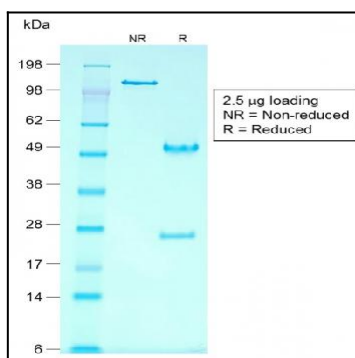


Fig. 2: SDS-PAGE Analysis Purified Glypican-3 Mouse Recombinant Monoclonal Ab (rGPC3/863). Confirmation of Integrity and Purity of Antibody.

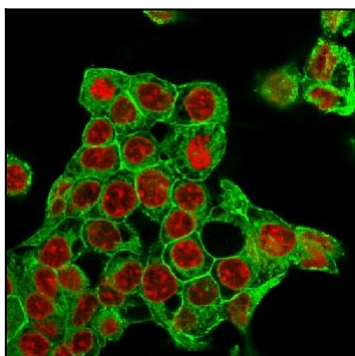


Fig. 3: Immunofluorescence Analysis of MeOH-fixed HepG2 cells labeling Glypican-3 with Glypican-3 Mouse Recombinant Monoclonal Ab (rGPC3/863) followed by Goat anti-Mouse IgG-CF488 (Green). The nuclear counterstain is Reddot (Red).

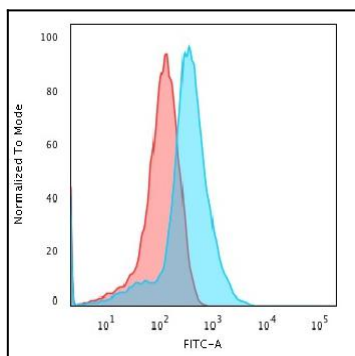


Fig. 4: Flow Cytometric Analysis of MeOH-fixed HepG2 cells using Glypican-3 Mouse Recombinant Monoclonal Ab (rGPC3/863) followed by Goat anti- Mouse- IgG-CF488 (Blue); Isotype Control (Red).

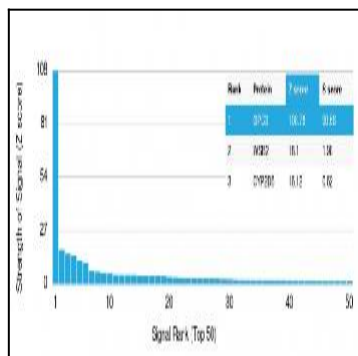


Fig. 5: Analysis of Protein Array containing more than 19,000 full-length human proteins using Mouse Glypican-3 Recombinant Monoclonal Antibody (rGPC3/863) Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt™ are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.