

Glypican-3 (GPC3) (Hepatocellular Carcinoma Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SPM595] Catalog # AH11317

Product Information

Application IHC, IF, FC
Primary Accession P51654
Other Accession 2719, 644108
Reactivity Human
Host Mouse
Clonality Monoclonal

Isotype Mouse / IgG1, kappa

Clone Names SPM595 Calculated MW 65563

Additional Information

Gene ID 2719

Other Names Glypican-3, GTR2-2, Intestinal protein OCI-5, MXR7, Secreted glypican-3, GPC3,

OCI5

Application Note IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50

Storage Store at 2 to 8°C.Antibody is stable for 24 months.

Precautions Glypican-3 (GPC3) (Hepatocellular Carcinoma Marker) Antibody - With BSA

and Azide is for research use only and not for use in diagnostic or therapeutic

procedures.

Protein Information

Name GPC3

Synonyms OCI5

Function Cell surface proteoglycan (PubMed: <u>14610063</u>). Negatively regulates the

hedgehog signaling pathway when attached via the GPI- anchor to the cell surface by competing with the hedgehog receptor PTC1 for binding to hedgehog proteins (By similarity). Binding to the hedgehog protein SHH triggers internalization of the complex by endocytosis and its subsequent lysosomal degradation (By similarity). Positively regulates the canonical Wnt signaling pathway by binding to the Wnt receptor Frizzled and stimulating the

binding of the Frizzled receptor to Wnt ligands (PubMed: 16227623, PubMed: 24496449). Positively regulates the non-canonical Wnt signaling

pathway (By similarity). Binds to CD81 which decreases the availability of free CD81 for binding to the transcriptional repressor HHEX, resulting in nuclear translocation of HHEX and transcriptional repression (By similarity). Inhibits the dipeptidyl peptidase activity of DPP4 (PubMed: 17549790). Plays a role in limb patterning and skeletal development by controlling the cellular response to BMP4 (By similarity). Modulates the effects of growth factors BMP2, BMP7 and FGF7 on renal branching morphogenesis (By similarity). Required for coronary vascular development (By similarity). Plays a role in regulating cell movements during gastrulation (By similarity).

Cellular Location Cell membrane; Lipid-anchor, GPI-anchor {ECO:0000250 | UniProtKB:P13265};

Extracellular side {ECO:0000250 | UniProtKB:P13265}

Tissue Location Detected in placenta (at protein level) (PubMed:32337544). Highly expressed

in lung, liver and kidney

Background

Glypican-3 (GPC3) is a glycosylphospatidyl 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.

References

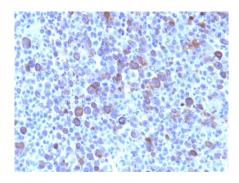
Yan, B., et al. 2011. Expression and clinicopathologic significance of glypican 3 in hepatocellular carcinoma. Ann. Diagn. Pathol. 15: 162-169. | |

Images



Formalin-fixed, paraffin-embedded human Hepatocellular Carcinoma stained with Glypican-3 Monoclonal Antibody (SPM595)

Formalin-fixed, paraffin-embedded human Melanoma stained with Glypican-3 Monoclonal Antibody (SPM595)



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