PRODUCT INFORMATION

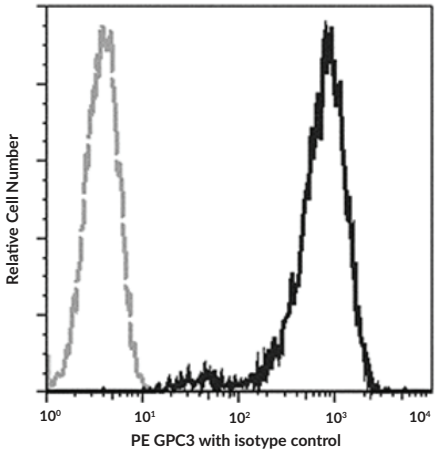
Glypican-3 Rabbit Monoclonal Antibody (PE) (Clone 024)

Item No. 37008

Overview and Properties

Contents:	This vial contains protein A-affinity purified monoclonal antibody
Synonyms:	GPC3, MXR7, OCI-5
Immunogen:	A synthetic peptide corresponding to the central region of human glypican-3
Cross Reactivity:	(+) Glypican-3
Species Reactivity:	(+) Human
Uniprot No.:	P51654
Form:	Liquid
Storage:	2-8°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS solution with 0.5% BSA and 0.03% ProClin™ 300
Concentration:	10 µl/Test, 0.1 mg/ml
Clone:	024
Host:	Rabbit
Isotype:	IgG
Application:	Flow cytometry (FC); the optimal working concentration/dilution should be determined empirically.

Image



Flow cytometric analysis of Human GPC3 expression in HepG2 cells. Cells were stained with Glypican-3 Rabbit Monoclonal Antibody (PE) (Clone 024). The fluorescence histogram was derived from gated events with the forward and side light-scatter characteristics of intact cells.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION

Description

Glypican-3 (GPC3) is a membrane-bound heparan sulfate proteoglycan.[1] It is composed of a signal peptide for membrane translocation, a cysteine-rich domain that contains a proteolytic cleavage site for proprotein convertases, a stalk region that contains heparan sulfate attachment sites, and a signal sequence for glycosylphosphatidylinositol (GPI) attachment, which anchors it to the cell surface. GPC3 is ubiquitously expressed during embryonic development and is only expressed in select adult tissues, including gastric glands and kidney tubules.[2,3] It is involved in canonical and non-canonical Wnt signaling and binds to various Wnt ligands and Frizzled receptors.[1,4] GPC3-targeting antibodies induce antibody-dependent cellular cytotoxicity (ADCC) and reduce tumor growth in hepatocellular carcinoma (HCC) mouse xenograft models.[5] Hepatic levels of GPC3 are increased in patients with HCC.[6] Mutations in *GPC3* are associated with Simpson-Golabi-Behmel syndrome (SGBS), an X-linked condition characterized by pre- and post-natal overgrowth.[2] Cayman's Glypican-3 Rabbit Monoclonal Antibody (PE) is composed of a GPC3 monoclonal antibody conjugated to phycoerythrin (PE) (Clone 024) and can be used for flow cytometry (FC).

References

1. De Cat, B., Muyldermans, S.-Y., Coomans, C., *et al.* Processing by proprotein convertases is required for glypican-3 modulation of cell survival, Wnt signaling, and gastrulation movements. *J. Cell. Biol.* **163(3)**, 625-635 (2003).
2. Pilia, G., Hughes-Benzie, R.M., MacKenzie, A., *et al.* Mutations in *GPC3*, a glypican gene, cause the Simpson-Golabi-Behmel overgrowth syndrome. *Nat. Genet.* **12(3)**, 241-247 (1996).
3. Baumhoer, D., Tornillo, L., Stadlmann, S., *et al.* Glypican 3 expression in human nonneoplastic, preneoplastic, and neoplastic tissues: A tissue microarray analysis of 4,387 tissue samples. *Am. J. Clin. Pathol.* **129(6)**, 899-906 (2008).
4. Capurro, M., Martin, T., Shi, W., *et al.* Glypican-3 binds to frizzled and plays a direct role in the stimulation of canonical Wnt signaling. *J. Cell. Sci.* **127 (Pt. 7)**, 1565-1575 (2014).
5. Ishiguro, T., Sugimoto, M., Kinoshita, Y., *et al.* Anti-glypican 3 antibody as a potential antitumor agent for human liver cancer. *Cancer Res.* **68(23)**, 9832-9838 (2008).
6. Capurro, M., Wanless, I.R., Sherman, M., *et al.* Glypican-3: A novel serum and histochemical marker for hepatocellular carcinoma. *Gastroenterology* **125(1)**, 89-97 (2003).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM