Human Glypican 3
Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 307801

Catalog Number: FAB2119V

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Glypican 3 in ELISAs and Western blots. Does not cross-react with recombinant human (rh) Glypican-2, rhGlypican-5, or rhGlypican-6.
Source	Monoclonal Mouse IgG_{2A} Clone # 307801
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Glypican 3 Gln25-Val558 Accession # P51654.1
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	HepG2 human hepatocellular carcinoma cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Glypicans (GPC) are a family of heparan sulfate proteoglycans that are attached to the cell surface by a glycosylphosphatidylinositol (GPI) anchor. Six members of this family have been identified in mammals (GPC1-GPC6). All glypican core proteins contain an N-terminal signal peptide, a large globular cysteine-rich domain (CRD) with 14 invariant cysteine residues, a stalk-like region containing the heparan sulfate attachment sites, and a C-terminal GPI attachment site. While glypican proteins do not share strong amino acid sequence identity (they range from 17-63%), the conserved cysteine residues in their CRDs suggests similarity in their three-dimensional structure (1, 2).

Mutations in GPC3 cause a rare disorder in humans, Simpson-Golabi-Behmel Syndrome, which is characterized by pre and postnatal overgrowth of multiple tissues and organs and an increased risk for developing embryonic tumors (3). These features are also present in the mouse knock-out of GPC3 indicating that GPC3 regulates cell survival and inhibits cell proliferation during development (4). Glypican 3 has been implicated in regulating many different signaling pathways including: IGF, FGF, BMP, and Wnt. An endoproteolytic processing of GPC3 by proprotein convertases is required for the modulation of Wnt signaling (5). Direct interaction with FGF-basic has been observed and is mediated by the heparan sulfate chains (6).

References:

1. Filmus, J. and S.B. Selleck (2001) J. Clinical Invest. **108**:497.
2. De Cat, B and G. David (2001) Seminars in Cell & Dev. Biol. **12**:117.
3. Pilia, G. *et al.* (1996) Nat. Genet. **12**: 241.
4. Cano-Gauci, D.F. *et al.* (1999) J. Cell Biol. **146**: 255.
5. De Cat, B. *et al.* (2003) J. Cell Biol. **163**:625.
6. Song, H.H. *et al.* (1997) J. Biol. Chem. **272**:7574.

PRODUCT SPECIFIC NOTICES

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