

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Glypican 6 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Glypican 2, 3, or 5 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 348701
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Glypican 6 Asp24-Val527 Accession # Q9Y625
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	HepG2 human hepatocellular carcinoma cell line fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005)

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

The Glypicans (*glypiated* proteoglycans) are a small multigene family of GPI-linked heparan sulfate (HS) proteoglycans that likely play a key role in embryonic morphogenesis (1-4). There are currently six known mammalian Glypicans. They all share a common-sized protein core of 60-70 kDa, an N-terminus which likely forms a compact globular domain, 14 conserved cysteines that form multiple intrachain disulfide bonds, and a number of C-terminal N- and O-linked carbohydrate attachment sites. Based on exon organization and the location of O-linked glycosylation sites, at least two subfamilies of Glypicans are known, with one subfamily containing Glypicans 1, 2, 4 and 6, and another subfamily containing Glypicans 3 and 5 (3, 5). Human Glypican 6 (GPC-6) is synthesized as a 554 amino acid (aa) preproprecursor that contains a 23 aa signal sequence, a 505 aa mature region and a 26 aa C-terminal prosegment (5, 6). There are four consecutive Ser-Gly repeats that serve as a heparin sulfate attachment site. GPC-6 is reported to be as large as 110 kDa in size. This translates into approximately 50 kDa of proteoglycan (5). Human to mouse, there is 97% aa identity over the entire GPC-6 molecule. Cells known to express GPC-6 are adult ovary and embryonic vascular and visceral smooth muscle, plus mesenchyme (embryonic connective tissue) in multiple organs (1, 5, 6). The function of GPC-6 is essentially unknown. As a Glypican family member, it may facilitate heparin-binding growth factor signaling and polyamine uptake into expressing cells (7, 8). In this regard, it would appear that GPC-6 with its attendant HS is down-regulated by triiodothyronine during cartilage maturation, thus limiting the availability of sites for FGF sequestration and activity (9).

## References:

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3. De Cat, B. and G. David (2001) *Semin. Cell Dev. Biol.* **12**:117.
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8. Fransson, L-A. (2003) *Int. J. Biochem. Cell Biol.* **35**:125.
9. Bassett, J.H.D. *et al.* (2006) *Endocrinology* **147**:295.

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