

DESCRIPTION

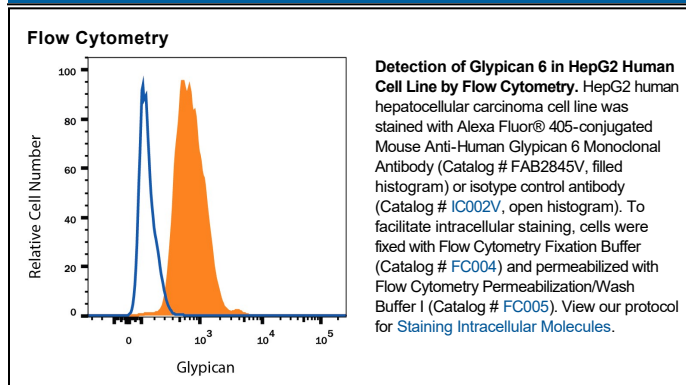
Species Reactivity	Human
Specificity	Detects human Glypican 6 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Glypican 2, 3, or 5 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 348701
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Glypican 6 Asp24-Val527 Accession # Q9Y625
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	See Below

DATA



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

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:

1. Song, H.H. and J. Filmus (2002) *Biochim. Biophys. Acta* **1573**:241.
2. Filmus, J. (2001) *Glycobiology* **11**:19R.
3. De Cat, B. and G. David (2001) *Semin. Cell Dev. Biol.* **12**:117.
4. Filmus, J. (2003) *Glycoconj. J.* **19**:319.
5. Veugelers, M. *et al.* (1999) *J. Biol. Chem.* **274**:26968.
6. Paine-Saunders, S. *et al.* (1999) *Genomics* **57**:455.
7. Fransson, L-A. *et al.* (2004) *Cell Mol. Life Sci.* **61**:1016.
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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