Human Glypican 1 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF4519

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Glypican 1 in Western blots. In Western blots, approximately 15% cross-reactivity with recombinant mouse Glypican 1 is observed and less than 1% cross-reactivity with recombinant human (rh)Glypican 5 and rhGlypican 6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Glypican 1 Asp24-Ser530 Accession # P35052
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

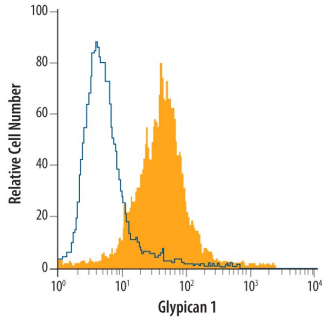
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human Glypican 1 (Catalog # 4519-GP)
Flow Cytometry	2.5 µg/10^6 cells	See Below

DATA

Flow Cytometry



Detection of Glypican 1 in MDA-MB-231 Human Cell Line by Flow Cytometry. MDA-MB-231 human breast cancer cell line was stained with Goat Anti-Human Glypican 1 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF4519, filled histogram) or isotype control antibody (Catalog # BAF108, open histogram), followed by Streptavidin-Phycoerythrin (Catalog # F0040).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

The Glypicans (*glypi*ated proteoglyc*ans*) are a small multigene family of GPI-linked proteoglycans that play a key role in growth factor signaling (1, 2, 3, 4). There are 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 1 (GPC-1) is synthesized as a 558 amino acid (aa) preproprecursor that contains a 23 aa signal sequence, a 507 aa mature segment, and a 28 aa C-terminal prosegment (6, 7). There are two potential N-linked and four potential O-linked sites for glycosylation or glycanation. There are potentially two heparan sulfate (HS) modifications on GPC-1 that could contribute to a native molecular weight of approximately 200 kDa (7, 8, 9). Mature human GPC-1 shares 91% aa identity with mature mouse GPC-1. There are two potential splice variants of human GPC-1. Both show an alternate start site at Met73, while one has an additional 65 aa substitution for the C-terminal 264 amino acids (10, 11). Cells known to express GPC-1 include neurons, smooth and skeletal muscle cells, keratinocytes, osteoblasts, Schwann cells, immature dendritic cells, and tumor, plus tumor-associated vascular endothelial cells (8, 9, 12-15). The function of GPC-1 is complex and varied. As a proteoglycan, it appears to make use of its HS adduct to impact select growth factor activity (16). This is accomplished by having juxtramembrane HS attachment sites, and a flexible, GPI-linkage (17). Data suggests GPC-1 and sulfation enzymes may collaborate to regulate FGF signaling. HS modules that are rich in 2-O- and 6-O- sulfate upregulate FGF-2 activation of FGFR1c (18). Similarly, FGF-1 requires both 2-O- and 6-O-sulfation to bind to FGFR2c and 3c. By contract, FGF-1 requires no sulfation to bind to FGFR2b, and FGF-8b needs only 6-O-sulfation to activate FGFR3c. Thus, many FGF receptor isoform specific effects may be attributed to an interaction between Glypican family members and the cell sulfation system (19).

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