

DESCRIPTION

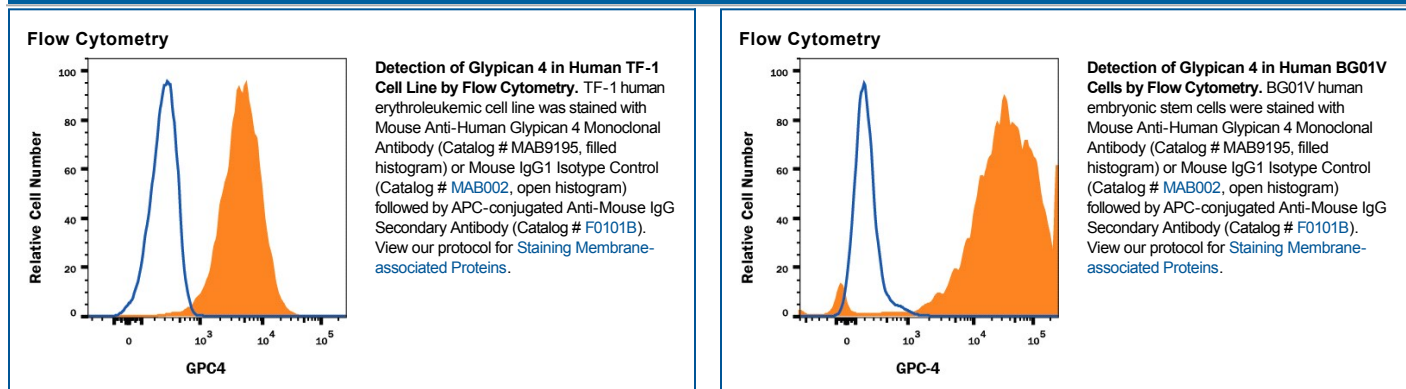
Species Reactivity	Human
Specificity	Detects human Glypican 4 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 961609
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Glypican 4 Met1-Ser529 Accession # O75487
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
ELISA	This antibody functions as an ELISA capture antibody when paired with Mouse Anti-Human Glypican 4 Monoclonal Antibody (Catalog # MAB91951). <i>This product is intended for assay development on various assay platforms requiring antibody pairs.</i>	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 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.

BACKGROUND

Glypican 4, also known as K-Glypican, is an approximately 220 kDa GPI-anchored heparan sulfate proteoglycan with a 60 kDa protein core (1, 2). It is expressed in brain, kidney, adrenal gland, and fat tissue (1, 3) and binds to basic FGF (2). Mature human Glypican 4 shares 97% and 96% amino acid (aa) sequence identity with mouse and rat Glypican 4, respectively. An alternative splice isoform lacks the N-terminal 70 aa including the signal peptide. In the developing brain, Glypican 4 is found in lateral ventricles surrounding the telencephalon, the dentate gyrus, proliferating neuroepithelial cells, and neural precursors (1, 2). It inhibits the dopaminergic differentiation of neurons (4). A 30 kDa cleaved form of Glypican 4 binds in cis to PTP sigma and contributes to excitatory synapse development and function (5). Glypican 4 is differentially expressed between adipose tissue depots (3). A soluble form can be released by adipocytes and circulates at elevated levels in obese patients with insulin resistance (3, 6). This form binds and enhances signaling through the Insulin R, and it also supports adipocyte differentiation (3). In zebrafish, Glypican 4 is required for cartilage formation and cardiomyocyte differentiation (7, 8).

References:

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7. Sisson, B.E. *et al.* (2015) *Mech. Dev.* **138**:279.
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