Human Glypican 4
Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 961609

Catalog Number: FAB9195T

100 µg

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
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *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	TF-1 Human Erythroleukemic Cell Line, and BG01V Human Embryonic Stem Cell

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

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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3. Ussar, S. *et al.* (2012) Diabetes **61**:2289.
4. Fico, A. *et al.* (2014) J. Neurosci. **34**:8318.
5. Ko, J.S. *et al.* (2015) Proc. Natl. Acad. Sci. USA **112**:1874.
6. Zhu, H.J. *et al.* (2014) J. Endocrinol. Metab. **99**:E2697.
7. Sisson, B.E. *et al.* (2015) Mech. Dev. **138**:279.
8. Strate, I. *et al.* (2015) Development **142**:1767.

PRODUCT SPECIFIC NOTICES

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