SANTA CRUZ BIOTECHNOLOGY, INC.

glypican-1 (A-10): sc-365000

BACKGROUND

Glypican-1 (GPC1), a member of the glycosylphosphatidilinositol-anchored cell surface heparan sulfate proteoglycans, is involved with cell adhesion and migration, lipoprotein metabolism, modulation of growth factor activites and anticoagulation. Glypican-1 binds to and modulates the activity of several fibroblast growth factors (FGFs), including FGF-1, FGF-2 and FGF-7. Glypican-1 acts as an extracellular chaperone for VEGF165 to help restore receptor binding ability after oxidation. The heparan sulfate chains of glypican-1 mediate specific binding of glypican-1 to VEGF165. When present on the surface of marrow stromal cells, glypican-1 may aid in the maintenance and development of hematopoietic stem and progenitor cells. Human pancreatic cancer cells express a large amount of glypican-1 when compared to glypican-1 levels in normal pancreatic cells. Glypican-1 may play an important role in the response of pancreatic cancer cells to mitogenic stimuli, such as FGF-2. The gene encoding human glypican-1 maps to chromosome 2q37.3.

REFERENCES

1. David, G. 1993. Integral membrane heparan sulfate proteoglycans. FASEB J. 7: 1023-1030.
2. Vermeesch, J.R., et al. 1995. Assignment of the human glypican gene (GPC1) to 2q35-q37 by fluorescence *in situ* hybridization. Genomics 25: 327-329.
3. Weksberg, R., et al. 1996. Glypicans: a growing trend. Nat. Genet. 12: 225-227.

CHROMOSOMAL LOCATION

Genetic locus: GPC1 (human) mapping to 2q37.3; Gpc1 (mouse) mapping to 1 D.

SOURCE

glypican-1 (A-10) is a mouse monoclonal antibody raised against amino acids 71-165 mapping near the N-terminus of glypican-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

glypican-1 (A-10) is available conjugated to agarose (sc-365000 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365000 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365000 PE), fluorescein (sc-365000 FITC), Alexa Fluor® 488 (sc-365000 AF488), Alexa Fluor® 546 (sc-365000 AF546), Alexa Fluor® 594 (sc-365000 AF594) or Alexa Fluor® 647 (sc-365000 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365000 AF680) or Alexa Fluor® 790 (sc-365000 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

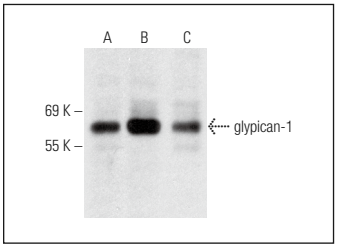
glypican-1 (A-10) is recommended for detection of glypican-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). glypican-1 (A-10) is also recommended for detection of glypican-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for glypican-1 siRNA (h): sc-40638, glypican-1 siRNA (m): sc-40639, glypican-1 shRNA Plasmid (h): sc-40638-SH, glypican-1 shRNA Plasmid (m): sc-40639-SH, glypican-1 shRNA (h) Lentiviral Particles: sc-40638-V and glypican-1 shRNA (m) Lentiviral Particles: sc-40639-V.

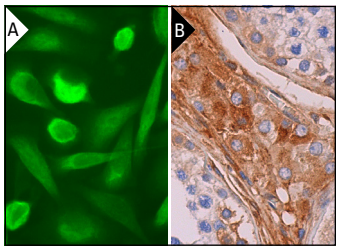
Molecular Weight of glypican-1: 64 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MIA PaCa-2 cell lysate: sc-2285 or LADMAC whole cell lysate: sc-364189.

DATA



glypican-1 (A-10): sc-365000. Western blot analysis of glypican-1 expression in K-562 (**A**), LADMAC (**B**) and MIA PaCa-2 (**C**) whole cell lysates.



glypican-1 (A-10) Alexa Fluor® 488: sc-365000 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane or cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells (**B**).

SELECT PRODUCT CITATIONS

1. Zeng, Y. and Liu, J. 2016. Role of glypican-1 in endothelial NOS activation under various steady shear stress magnitudes. Exp. Cell Res. 348: 184-189.
2. Gonzalez, E., et al. 2021. Could protein content of urinary extracellular vesicles be useful to detect cirrhosis in alcoholic liver disease? Int. J. Biol. Sci. 17: 1864-1877.
3. Dong, R., et al. 2023. Rutin alleviates EndMT by restoring autophagy through inhibiting HDAC1 via PI3K/AKT/mTOR pathway in diabetic kidney disease. Phytomedicine 112: 154700.
4. Liu, P.Y., et al. 2024. Total flavonoids of *Astragalus* protects glomerular filtration barrier in diabetic kidney disease. Chin. Med. 19: 27.

RESEARCH USE

For research use only, not for use in diagnostic procedures.