SANTA CRUZ BIOTECHNOLOGY, INC.

glypican-1 (N-16): sc-14645

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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: 327-339.
3. Steinfeld, R., et al. 1996. Stimulation of fibroblast growth factor receptor-1 occupancy and signaling by cell surface-associated syndecans and glypican. J. Cell Biol. 133: 405-416.
4. Weksberg, R., et al. 1996. Glypicans: a growing trend. Nat. Genet. 12: 225-227.
5. Bonneh-Barkay, D., et al. 1997. Identification of glypican as a dual modulator of the biological activity of fibroblast growth factors. J. Biol. Chem. 272: 12415-12421.

CHROMOSOMAL LOCATION

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

SOURCE

glypican-1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of glypican-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14645 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 (N-16) is recommended for detection of glypican-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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 (N-16) is also recommended for detection of glypican-1 in additional species, including bovine and avian.

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 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Hernandez-Hernandez, A., et al. 2006. Alterations in erythrocyte membrane protein composition in advanced non-small cell lung cancer. Blood Cells Mol. Dis. 36: 355-563.
2. Wegrowski, Y., et al. 2006. Cell surface proteoglycan expression during maturation of human monocytes-derived dendritic cells and macrophages. Clin. Exp. Immunol. 144: 485-493.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.