

glypican-3 (G-16): sc-10456

BACKGROUND

Glypican-3 (GPC3) is an integral membrane protein that is mutated in the Simpson-Golabi-Behmel syndrome (SGBS). SGBS is characterized by pre- and post-natal overgrowth and is a recessive X-linked condition. Glypican-3, also designated OCI-5 in rat, is a member of the glypican family of heparan sulfate proteoglycans, which attach to the cell membrane via a glycosyl-phosphatidylinositol (GPI) anchor. Expression of glypican-3 is detected in embryonic mesodermal lung, liver and kidney tissues. Glypican-3 is thought to regulate tissue and organ growth through interactions with growth factors such as Insulin-like growth factor II (IGF-II) or fibroblast growth factor 2 (FGF-2). Glypican-3 may be downregulated by various means, including promoter hypermethylation or the repression of specific transcription factors.

REFERENCES

1. Pilia, G., et al. 1996. Mutations in GPC3, a glypican gene, cause the Simpson-Golabi-Behmel overgrowth syndrome. *Nat. Genet.* 12: 241-247.
2. Song, H.H., et al. 1997. OCI-5/rat glypican-3 binds to fibroblast growth factor-2 but not to Insulin-like growth factor-2. *J. Biol. Chem.* 272: 7574-7577.
3. Li, M., et al. 1997. Expression of OCI-5/glypican 3 during intestinal morphogenesis: regulation by cell shape in intestinal epithelial cells. *Exp. Cell Res.* 235: 3-12.
4. Gonzalez, A.D., et al. 1998. OCI-5/GPC3, a glypican encoded by a gene that is mutated in the Simpson-Golabi-Behmel overgrowth syndrome, induces apoptosis in a cell line-specific manner. *J. Cell Biol.* 141: 1407-1414.
5. Cano-Gauci, D.F., et al. 1999. Glypican-3-deficient mice exhibit developmental overgrowth and some of the abnormalities typical of Simpson-Golabi-Behmel syndrome. *J. Cell Biol.* 146: 255-264.
6. Lin, H., et al. 1999. Frequent silencing of the GPC3 gene in ovarian cancer cell lines. *Cancer Res.* 59: 807-810.
7. Murthy, S.S., et al. 2000. Expression of GPC3, an X-linked recessive overgrowth gene, is silenced in malignant mesothelioma. *Oncogene* 19: 410-416.

CHROMOSOMAL LOCATION

Genetic locus: GPC3 (human) mapping to Xq26.2; Gpc3 (mouse) mapping to X A5.

SOURCE

glypican-3 (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of glypican-3 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-10456 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

glypican-3 (G-16) is recommended for detection of glypican-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

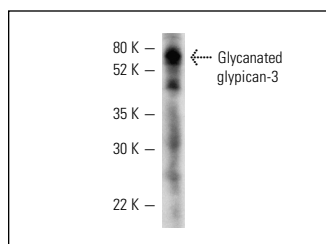
glypican-3 (G-16) is also recommended for detection of glypican-3 in additional species, including equine and bovine.

Suitable for use as control antibody for glypican-3 siRNA (h): sc-40640, glypican-3 siRNA (m): sc-40641, glypican-3 shRNA Plasmid (h): sc-40640-SH, glypican-3 shRNA Plasmid (m): sc-40641-SH, glypican-3 shRNA (h) Lentiviral Particles: sc-40640-V and glypican-3 shRNA (m) Lentiviral Particles: sc-40641-V.

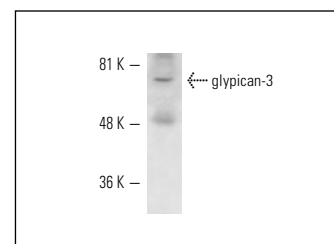
Molecular Weight of glypican-3: 67 kDa.

Positive Controls: mouse embryo extract: sc-364239, IMR-32 cell lysate: sc-2409 or PC-12 cell lysate: sc-2250.

DATA



glypican-3 (G-16): sc-10456. Western blot analysis of glypican-3 expression in mouse embryo extract.



glypican-3 (G-16): sc-10456. Western blot analysis of glypican-3 expression in PC-12 whole cell lysate.

STORAGE

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

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.


 MONOS
Satisfation
Guaranteed

Try **glypican-3 (F-3): sc-390587** or **glypican-3 (H-10): sc-377266**, our highly recommended monoclonal alternatives to glypican-3 (G-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **glypican-3 (F-3): sc-390587**.