

glypican-2 (F-5): sc-393824

BACKGROUND

Glypican-1 (GPC1), glypican-2 (GPC2) and glypican-3 (GPC3) are members of the glypican family of heparan sulfate proteoglycans, which attach to the cell membrane via a glycosylphosphatidylinositol (GPI) anchor. Cell-surface heparan sulfate proteoglycans participate in molecular events that regulate cell adhesion, migration, and proliferation. Glypican-2, a cell surface proteoglycan bearing heparan sulfate, may have a function related to the motile behaviors of developing neurons. Ligation of cell-surface glypican-2 with midkine (MK) or an antibody against epitope-tagged glypican-2 induces cell adhesion and promotes neurite outgrowth. MK binds to heparan sulfate chains of glypican-2 in a manner similar to syndecan-3, but different localization of epitope-tagged glypican-2 and syndecan-3 on the surface of N2α cells suggests that they may play different roles in MK-mediated neural function.

CHROMOSOMAL LOCATION

Genetic locus: GPC2 (human) mapping to 7q22.1.

SOURCE

glypican-2 (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 450-473 within an internal region of glypican-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

glypican-2 (F-5) is available conjugated to agarose (sc-393824 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393824 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393824 PE), fluorescein (sc-393824 FITC), Alexa Fluor[®] 488 (sc-393824 AF488), Alexa Fluor[®] 546 (sc-393824 AF546), Alexa Fluor[®] 594 (sc-393824 AF594) or Alexa Fluor[®] 647 (sc-393824 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393824 AF680) or Alexa Fluor[®] 790 (sc-393824 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393824 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

glypican-2 (F-5) is recommended for detection of glypican-2 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for glypican-2 siRNA (h): sc-44386, glypican-2 shRNA Plasmid (h): sc-44386-SH and glypican-2 shRNA (h) Lentiviral Particles: sc-44386-V.

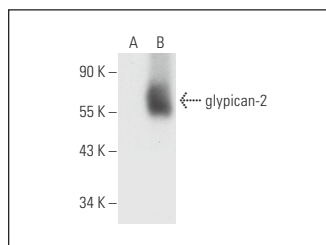
Molecular Weight of glypican-2: 63 kDa.

Positive Controls: glypican-2 (h3): 293T Lysate: sc-176472 or IMR-32 cell lysate: sc-2409.

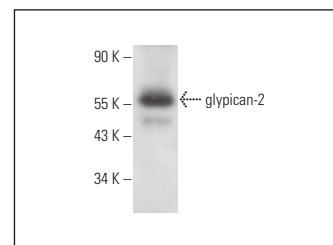
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



glypican-2 (F-5): sc-393824. Western blot analysis of glypican-2 expression in non-transfected: sc-117752 (A) and human glypican-2 transfected: sc-176472 (B) 293T whole cell lysates.



glypican-2 (F-5): sc-393824. Western blot analysis of glypican-2 expression in IMR-32 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Bosse, K.R., et al. 2017. Identification of GPC2 as an oncoprotein and candidate immunotherapeutic target in high-risk neuroblastoma. *Cancer Cell* 32: 295-309.e12.
2. Ognibene, M., et al. 2020. Ronciclib down-regulates stemness and inhibits cell growth by inducing nucleolar stress in neuroblastoma. *Sci. Rep.* 10: 12902.
3. Raman, S., et al. 2021. A GPC2 antibody-drug conjugate is efficacious against neuroblastoma and small-cell lung cancer via binding a conformational epitope. *Cell Rep. Med.* 2: 100344.
4. Heitzeneder, S., et al. 2022. GPC2-CAR T cells tuned for low antigen density mediate potent activity against neuroblastoma without toxicity. *Cancer Cell* 40: 53-69.e9.
5. Foster, J.B., et al. 2022. Development of GPC2-directed chimeric antigen receptors using mRNA for pediatric brain tumors. *J. Immunother. Cancer* 10: e004450.

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.

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