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Glypican 3 (GPC3) Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6339C

Product Information

Application	IF, WB, E
Primary Accession	P51654
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB5036
Calculated MW	65563
Antigen Region	335-365

Additional Information

Gene ID	2719
Other Names	Glypican-3, GTR2-2, Intestinal protein OCI-5, MXR7, Secreted glypican-3, GPC3, OCI5
Target/Specificity	This Glypican 3 (GPC3) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 335-365 amino acids from the Central region of human Glypican 3 (GPC3).
Dilution	IF~~Tested WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Glypican 3 (GPC3) Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GPC3
Synonyms	OCI5
Function	Cell surface proteoglycan (PubMed: 14610063). Negatively regulates the

	hedgehog signaling pathway when attached via the GPI- anchor to the cell surface by competing with the hedgehog receptor PTC1 for binding to hedgehog proteins (By similarity). Binding to the hedgehog protein SHH triggers internalization of the complex by endocytosis and its subsequent lysosomal degradation (By similarity). Positively regulates the canonical Wnt signaling pathway by binding to the Wnt receptor Frizzled and stimulating the binding of the Frizzled receptor to Wnt ligands (PubMed:16227623, PubMed:24496449). Positively regulates the non-canonical Wnt signaling pathway (By similarity). Binds to CD81 which decreases the availability of free CD81 for binding to the transcriptional repressor HHEX, resulting in nuclear translocation of HHEX and transcriptional repression (By similarity). Inhibits the dipeptidyl peptidase activity of DPP4 (PubMed:17549790). Plays a role in limb patterning and skeletal development by controlling the cellular response to BMP4 (By similarity). Modulates the effects of growth factors BMP2, BMP7 and FGF7 on renal branching morphogenesis (By similarity). Required for coronary vascular development (By similarity). Plays a role in regulating cell movements during gastrulation (By similarity).
Cellular Location	Cell membrane; Lipid-anchor, GPI-anchor {ECO:0000250|UniProtKB:P13265}; Extracellular side {ECO:0000250|UniProtKB:P13265}
Tissue Location	Detected in placenta (at protein level) (PubMed:32337544). Highly expressed in lung, liver and kidney

Background

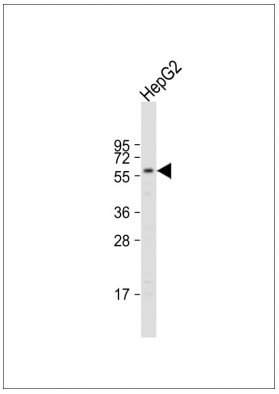
GPC3 is a cell surface proteoglycan that bears heparan sulfate. This protein may be involved in the suppression/modulation of growth in the predominantly mesodermal tissues and organs, and may play a role in the modulation of IGF2 interactions with its receptor and thereby modulate its function. Members of the glypican-related integral membrane proteoglycan family contain a core protein anchored to the cytoplasmic membrane via a glycosyl phosphatidylinositol (GPI) linkage. These proteins may play a role in the control of cell division, growth regulation, and tumor predisposition. Deletion mutations in GPC3 are the cause of Simpson-Golabi-Behmel syndrome (SGBS), also known as Simpson dysmorphia syndrome (SDYS). SGBS is a condition characterized by pre- and postnatal overgrowth (gigantism) with visceral and skeletal anomalies.

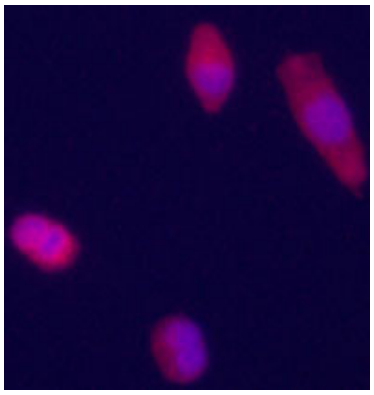
References

Nakatsura, T., et al., Clin. Cancer Res. 10(19):6612-6621 (2004).
Boily, G., et al., Br. J. Cancer 90(8):1606-1611 (2004).
Wichert, A., et al., Oncogene 23(4):945-955 (2004).
Midorikawa, Y., et al., Int. J. Cancer 103(4):455-465 (2003).
Sung, Y.K., et al., Cancer Sci. 94(3):259-262 (2003).

Images

Anti-GPC3 Antibody (C349) at 1:1000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 66 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





Immunofluorecence staining of anti-GPC3 Pab (cat# AP6339c) on HepG2 cells. The cells were acetone fixated. Antibody dilution of 1:50. Original magnification 1:400. Data and protocol courtesy of Dr. Mariana Dabeva, Department of Medicine at Albert Einstein College of Medicine.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.