abcam

ab275697

PE Anti-Glypican 3 antibody [024]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	Preservative: 0.03% Proclin 300 Constituents: 0.5% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human GPC3. The exact immunogen used to generate this antibody is proprietary information. Database link P51654
Clone number	024
Purification technique	Affinity purification Protein A
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	-
Notes	10 µl/Test

Target data

See full target information GPC3

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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze, Store in the dark

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Glypican 3 also known as GPC3 is a cell surface heparan sulfate proteoglycan with a core protein mass of approximately 70 kDa. This target is anchored to the external cell membrane through a glycosylphosphatidylinositol (GPI) anchor. Glypican 3 is expressed mainly in tissues such as the liver and kidneys and plays a role in modulating cell growth and development. In research studies it is often

	studied in various species including in the mouse and cynomolgus monkey models where it's referred to as mouse glypican 3 and cynomolgus glypican 3 respectively.
Biological function summary	Glypican 3 is involved in the modulation of signaling pathways that control cell proliferation and differentiation. It does not function as an isolated element; it has a role as part of a complex network that interacts with growth factors morphogens and other proteoglycans. Glypican 3 assists in the regulation of important biological events by influencing the accessibility and activity of signaling molecules on the cell surface. Its heparan sulfate chains interact with multiple proteins modifying their function and availability.
Pathways	Glypican 3 plays a significant part in the Wnt and Hedgehog signaling pathways. In the Wnt pathway it regulates the distribution and gradient formation of Wnt proteins which are essential for proper embryonic development. In the Hedgehog pathway glypican 3 modulates the distribution and activity of Hedgehog proteins important for tissue patterning and organogenesis. Other proteins closely related to glypican 3 in these pathways include those from the frizzled family in the Wnt pathway and Patched proteins in the Hedgehog pathway.
Associated diseases and disorders	Glypican 3 has a strong connection to hepatocellular carcinoma (HCC) and Simpson-Golabi-Behmel syndrome (SGBS). In HCC increased expression of glypican 3 is often observed which associates it with tumor growth and proliferation. It functions alongside other oncogenic factors like alpha-fetoprotein (AFP) which is another marker for liver cancer. In SGBS mutations in the GPC3 gene result in defects in cellular signaling pathways leading to developmental abnormalities. This syndrome highlights the impact of glypican 3 on growth regulation and its interactions with insulin-like growth factors (IGFs).

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

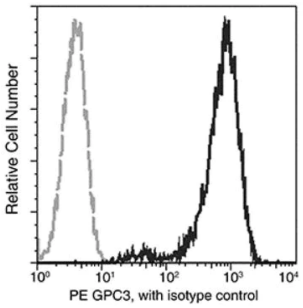
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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1 product image



Flow Cytometry - PE Anti-Glypican 3 antibody [024] (ab275697)

Glypican 3 Flow Cytometry staining using rabbit Anti-Glypican 3 antibody

Flow cytometric analysis of HepG2 (human liver hepatocellular carcinoma cell line) cells labeling Glypican 3 with ab275697 (Black) compared with isotype control (Grey). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.

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