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Glypican 1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57971

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9QZF2
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	61360
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse Glypican 1
Epitope Specificity	251-350/557
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane; Lipid-anchor, GPI-anchor; Extracellular side. Endosome. Note=S-nitrosylated form recycled in endosomes. Localizes to CAV1-containing vesicles close to the cell surface. Cleavage of heparan sulfate side chains takes place mainly in late endosomes. Associates with both forms of PRNP in lipid rafts. Colocalizes with APP in perinuclear compartments and with CP in intracellular compartments. Associates with fibrillar APP Abeta peptides in lipid rafts in Alzheimer disease brains. Secreted glypican-1: Secreted, extracellular space.
SIMILARITY	Belongs to the glypican family.
Post-translational modifications	S-nitrosylated in a Cu(2+)-dependent manner. Nitric acid (NO) is released from the nitrosylated cysteines by ascorbate or by some other reducing agent, in a Cu(2+) or Zn(2+) dependent manner. This free nitric oxide is then capable of cleaving the heparan sulfate side chains. N- and O-glycosylated. N-glycosylation is mainly of the complex type containing sialic acid. O-glycosylated with heparin sulfate. The heparan sulfate chains can be cleaved either by the action of heparanase or, degraded by a daaminative process that uses nitric oxide (NO) released from the S-nitrosylated cysteines. This process is triggered by ascorbate, or by some other reducing agent, in a Cu(2+)- or Zn(2+) dependent manner. Cu(2+) ions are provided by ceruloproteins such as APP, PRNP or CP which associate with GCP1 in intracellular compartments or lipid rafts. This cell-associated glypican is further processed to give rise to a medium-released species.
DISEASE	Note=Associates (via the heparan sulfate side chains) with fibrillar APP-beta amyloid peptides in primitive and classic amyloid plaques and may be involved in the deposition of these senile plaques in the Alzheimer disease (AD) brain. Note=Misprocessing of GPC1 is found in fibroblasts of patients with Niemann-Pick Type C1 disease. This is due to the defective deaminative degradation of heparan sulfate chains.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Cell surface heparan sulfate proteoglycans are composed of a

membrane-associated protein core substituted with a variable number of heparan sulfate chains. Members of the glypican-related integral membrane proteoglycan family (GRIPS) contain a core protein anchored to the cytoplasmic membrane via a glycosyl phosphatidylinositol linkage. These proteins may play a role in the control of cell division and growth regulation. [provided by RefSeq, Jul 2008]

Additional Information

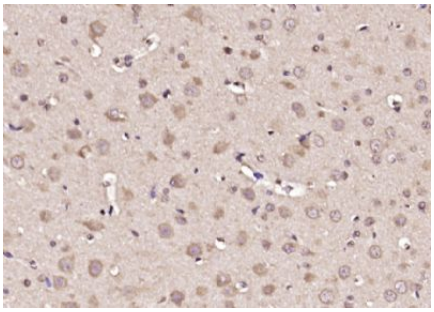
Gene ID	14733
Other Names	Glypican-1, Secreted glypican-1, Gpc1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,Flow-Cyt=2ug/Test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

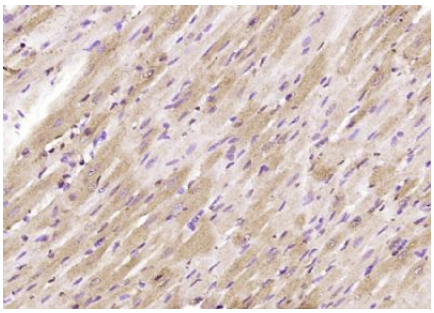
Name	Gpc1
Function	Cell surface proteoglycan that bears heparan sulfate. Binds, via the heparan sulfate side chains, alpha-4 (V) collagen and participates in Schwann cell myelination (By similarity). May act as a catalyst in increasing the rate of conversion of prion protein PRPN(C) to PRNP(Sc) via associating (via the heparan sulfate side chains) with both forms of PRPN, targeting them to lipid rafts and facilitating their interaction. Required for proper skeletal muscle differentiation by sequestering FGF2 in lipid rafts preventing its binding to receptors (FGFRs) and inhibiting the FGF-mediated signaling. Binds Cu(2+) or Zn(2+) ions.
Cellular Location	Cell membrane; Lipid-anchor, GPI-anchor; Extracellular side. Endosome. Note=S-nitrosylated form recycled in endosomes. Localizes to CAV1-containing vesicles close to the cell surface. Cleavage of heparan sulfate side chains takes place mainly in late endosomes. Associates with both forms of PRNP in lipid rafts Colocalizes with APP in perinuclear compartments and with CP in intracellular compartments. Associates with fibrillar APP amyloid-beta peptides in lipid rafts in Alzheimer disease brains

Images

Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Glypican 1) Polyclonal Antibody, Unconjugated (AP57971) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit)



(sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat heart); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Glypican 1) Polyclonal Antibody, Unconjugated (AP57971) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.