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GPHN Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9785c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q9NQX3
Other Accession	Q03555, Q8BUV3, Q9PW38
Reactivity	Human, Mouse
Predicted	Chicken, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24625
Calculated MW	79748
Antigen Region	437-466

Additional Information

Gene ID	10243
Other Names	Gephyrin, Molybdopterin adenylyltransferase, MPT adenylyltransferase, Domain G, Molybdopterin molybdenumtransferase, MPT Mo-transferase, Domain E, GPHN, GPH, KIAA1385
Target/Specificity	This GPHN antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 437-466 amino acids from the Central region of human GPHN.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	GPHN Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GPHN (HGNC:15465)

Synonyms	GPH, KIAA1385
Function	Microtubule-associated protein involved in membrane protein- cytoskeleton interactions. It is thought to anchor the inhibitory glycine receptor (GLYR) to subsynaptic microtubules (By similarity). Acts as a major instructive molecule at inhibitory synapses, where it also clusters GABA type A receptors (PubMed:25025157, PubMed:26613940).
Cellular Location	Postsynaptic cell membrane; Lipid- anchor; Cytoplasmic side. Cell membrane {ECO:0000250|UniProtKB:Q03555}; Lipid-anchor {ECO:0000250|UniProtKB:Q03555}; Cytoplasmic side {ECO:0000250|UniProtKB:Q03555}. Cytoplasm, cytosol. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q03555}. Cell projection, dendrite. Postsynaptic density {ECO:0000250|UniProtKB:Q8BUV3}. Note=Cytoplasmic face of glycinergic postsynaptic membranes (By similarity). Forms clusters at synapses (PubMed:25025157). {ECO:0000250|UniProtKB:Q03555, ECO:0000269|PubMed:25025157}

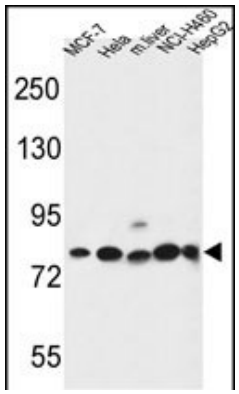
Background

GPHN encodes a neuronal assembly protein that anchors inhibitory neurotransmitter receptors to the postsynaptic cytoskeleton via high affinity binding to a receptor subunit domain and tubulin dimers. In nonneuronal tissues, the encoded protein is also required for molybdenum cofactor biosynthesis. Mutations in this gene may be associated with the neurological condition hyperplexia and also lead to molybdenum cofactor deficiency.

References

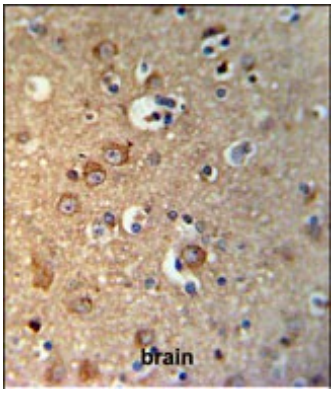
Tabakoff, B., et al. BMC Biol. 7, 70 (2009)
Fritschy, J.M., et al. Trends Neurosci. 31(5):257-264(2008)
Inada, T., et al. Pharmacogenet. Genomics 18(4):317-323(2008)
Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007)
Ehrensperger, M.V., et al. Biophys. J. 92(10):3706-3718(2007)
Olsen, J.V., et al. Cell 127(3):635-648(2006)

Images

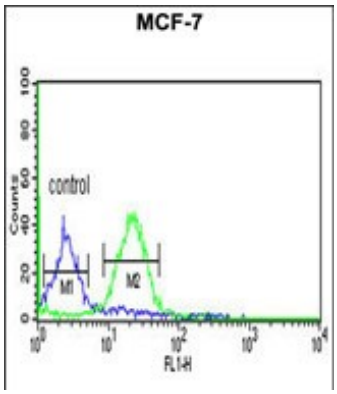


GPHN Antibody (Center) (Cat. #AP9785c) western blot analysis in MCF-7,Hela,NCI-H460,HepG2 cell line and mouse liver tissue lysates (35ug/lane).This demonstrates the GPHN antibody detected the GPHN protein (arrow).

GPHN Antibody (Center) (Cat. #AP9785c) IHC analysis in formalin fixed and paraffin embedded brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the GPHN Antibody (Center) for immunohistochemistry. Clinical relevance has not been



evaluated.



GPHN Antibody (Center) (Cat. #AP9785c) flow cytometric analysis of MCF-7 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.