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SEPT4 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7621a

Product Information

Application	IHC-P, FC, WB, E
Primary Accession	O43236
Other Accession	Q4R4X5
Reactivity	Human, Mouse
Predicted	Monkey, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18576
Calculated MW	112439
Antigen Region	1-30

Additional Information

Gene ID	5414
Other Names	Septin-4, Apoptosis-related protein in the TGF-beta signaling pathway, ARTS, Bradeion beta, Brain protein H5, CE5B3 beta, Cell division control-related protein 2, hCDCREL-2, Cerebral protein 7, Peanut-like protein 2, SEPT4, ARTS, PNUTL2, SEP4
Target/Specificity	This SEPT4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human SEPT4.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 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	SEPT4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SEPTIN4 (HGNC:9165)

Function	Filament-forming cytoskeletal GTPase (Probable). Pro- apoptotic protein involved in LGR5-positive intestinal stem cell and Paneth cell expansion in the intestines, via its interaction with XIAP (By similarity). May also play a role in the regulation of cell fate in the intestine (By similarity). Positive regulator of apoptosis involved in hematopoietic stem cell homeostasis; via its interaction with XIAP (By similarity). Negative regulator of repair and hair follicle regeneration in response to injury, due to inhibition of hair follicle stem cell proliferation, potentially via its interaction with XIAP (By similarity). Plays an important role in male fertility and sperm motility (PubMed:36135717). During spermiogenesis, essential for the establishment of the annulus (a fibrous ring structure connecting the midpiece and the principal piece of the sperm flagellum) which is a requisite for the structural and mechanical integrity of the sperm (PubMed:36135717). Involved in the migration of cortical neurons and the formation of neuron leading processes during embryonic development (By similarity). Required for dopaminergic metabolism in presynaptic autoreceptors; potentially via activity as a presynaptic scaffold protein (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:P28661}. Cell projection, cilium, flagellum. Cytoplasmic vesicle, secretory vesicle. Cell projection, axon {ECO:0000250|UniProtKB:P28661}. Cell projection, dendrite {ECO:0000250|UniProtKB:P28661}. Perikaryon {ECO:0000250|UniProtKB:P28661}. Synapse Note=In platelets, found in areas surrounding alpha-granules (PubMed:15116257). Found in the sperm annulus, a fibrous ring structure connecting the midpiece and the principal piece of the sperm flagellum (PubMed:25588830, PubMed:36135717). Expressed and colocalized with SLC6A3 and SNCA in axon terminals, especially at the varicosities (By similarity). {ECO:0000250|UniProtKB:P28661, ECO:0000269|PubMed:15116257, ECO:0000269|PubMed:25588830, ECO:0000269|PubMed:36135717}
Tissue Location	Widely expressed in adult and fetal tissues with highest expression in adult brain (at protein level), heart, liver and adrenal gland and fetal heart, kidney, liver and lung. Expressed in presynaptic terminals of dopaminergic neurons projecting from the substantia nigra pars compacta to the striatum (at protein level) (PubMed:17296554). Expressed in axonal varicosities in dopaminergic nerve terminals (at protein level) (PubMed:17296554). Expressed in the putamen and in the adjacent cerebral cortex (at protein level) (PubMed:17296554). Expressed in colonic crypts (at protein level) (PubMed:30389919). Expressed in platelets. Expressed in spermatozoa (at protein level) (PubMed:36135717).

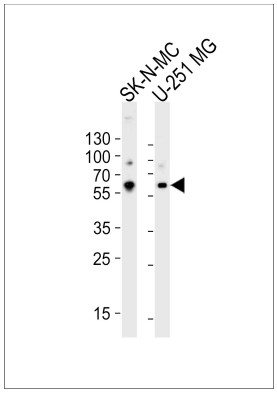
Background

PNUTL2 is a member of the septin family of nucleotide binding proteins, originally described in yeast as cell division cycle regulatory proteins. Septins are highly conserved in yeast, Drosophila, and mouse and appear to regulate cytoskeletal organization. The protein is thought to be part of a complex involved in cytokinesis.

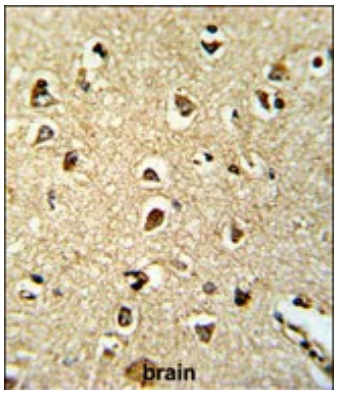
References

Garcia,W., Rodrigues,N.C. Biochim. Biophys. Acta 1784 (11), 1720-1727 (2008)
Garcia,W., de Araujo,A.P. Biochemistry 46 (39), 11101-11109 (2007)
Paavola,P., Horelli-Kuitunen,N. Genomics 55 (1), 122-125 (1999)

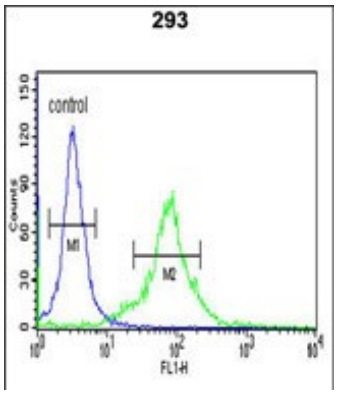
Images



Western blot analysis of lysates from SK-N-MC, U-251 MG cell line (from left to right), using PNUTL2 Antibody (N-term)(Cat. #AP7621a). AP7621a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



Formalin-fixed and paraffin-embedded human brain tissue reacted with PNUTL2 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



PNUTL2 Antibody (N-term) (Cat. #AP7621a) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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