10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ARTS/SEPT4 Rabbit pAb

Catalog # AP99302

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O43236
Other Accession	O43236
Predicted	Rat, Pig, Human, Mouse, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	112439
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ARTS
Epitope Specificity	91-150/478
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the peptidase M1 family.
SUBUNIT	Septins polymerize into heterooligomeric proteincomplexes that form filaments, and can associate with cellularmembranes, actin filaments and microtubules. GTPase activity isrequired for filament formation (By similarity). Interacts withSEPT8. In a mesenchymal cell line, interacts with SEPT9 isoform 2variants HNA Trp-106 and Phe-111, but not the wild type SEPT9.Isoform ARTS, but no other isoforms, interacts with XIAP after theinduction of apoptosis.
Post-translational modifications	N-glycosylated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene is a member of the septin family of nucleotidebinding proteins, originally described in yeast as cell divisioncycle regulatory proteins. Septins are highly conserved in yeast,Drosophila, and mouse, and appear to regulate cytoskeletalorganization. Disruption of septin function disturbs cytokinesisand results in large multinucleate or polyploid cells. This gene ishighly expressed in brain and heart. Alternatively splicedtranscript variants encoding different isoforms have been describedfor this gene. One of the isoforms (known as ARTS) is distinct; itis localized to the mitochondria, and has a role in apoptosis andcancer. [provided by RefSeq, Nov 2010].

Additional Information

Gene ID	5414
Other Names	45904; ARTS; BRADEION; C17orf47; CE5B3; H5; MART; PNUTL2; SEP4; SEPT4; SPGF99; Septin-4; hCDCREL-2; hucep-7; Bh5; Gm11492; EG3-1RVC; EG3RVC; SEPT4_HUMAN; SEPTIN4; Bradeion beta; Brain protein H5; CE5B3 beta; Cell division control-related protein 2 (hCDCREL-2); Peanut-like protein 2;

	SEPT4_MOUSE; septin 4; peanut-like 2 (Drosophila); chromosome 17 open reading frame 47; bradeoin; septin-M
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	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).

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