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

ABCA7 Rabbit pAb

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Catalog # AP54416

Product Information

Primary Accession	Q8IZY2
Reactivity	Human
Predicted	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	234350
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ABCA7
Epitope Specificity	251-350/2146
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; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Endosome membrane; Multi-pass membrane protein. Note=Localizes to cell membrane ruffles and phagocytic cups of macrophages stimulated with C1q or apoptotic cells. Localizes to the cytoplasm of resting macrophages, probably in Golgi and endosomes. Localizes to the apical brush border of cells in the proximal tubules of kidney. Isoform 2 may localize to the endoplasmic reticulum.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	ATP-binding cassette (ABC) transporters are an evolutionarily conserved family of widely-expressed proteins that use ATP hydrolysis to catalyze the transport of various molecules across extracellular and intracellular membranes. Eukaryotic ABC transporters are largely responsible for trafficking hydrophobic compounds either within the cell as part of a metabolic process, outside the cell for transport to other organs, or for secretion from the body. The cholesterol-responsive transporter, ABCA7, maps to human chromosome 19 and mouse chromosome 10 and has been reported as a candidate regulator of ceramide transport in epidermal lipid reorganization. High expression levels of ABCA7 have been reported in myelolymphatic tissues, reticuloendothelial cells, peripheral leukocytes, thymus, spleen and bone marrow. This expression pattern of the two alternatively-spliced isoforms also indicates an involvement in lipid homeostasis in cells of the immune system, though the complete role of ABCA7 is not yet known. Full-length type I ABCA7 has shown plasma membrane localization, while the type II splicing variant has shown expression predominantly in the endoplasmic reticulum.

Additional Information

Gene ID	10347
Other Names	Phospholipid-transporting ATPase ABCA7, 7.6.2.1, ABCA-SSN, ATP-binding cassette sub-family A member 7, Autoantigen SS-N {ECO:0000303|Ref.6}, Macrophage ABC transporter, ABCA7 (HGNC:37)
Dilution	Flow-Cyt=1ug/test
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	ABCA7 (HGNC:37)
Function	Catalyzes the translocation of specific phospholipids from the cytoplasmic to the extracellular/lumenal leaflet of membrane coupled to the hydrolysis of ATP (PubMed:24097981). Transports preferentially phosphatidylserine over phosphatidylcholine (PubMed:24097981). Plays a role in lipid homeostasis and macrophage- mediated phagocytosis (PubMed:12917409, PubMed:12925201, PubMed:14570867, PubMed:14592415). Binds APOA1 and may function in apolipoprotein-mediated phospholipid efflux from cells (PubMed:12917409, PubMed:14570867, PubMed:14592415). May also mediate cholesterol efflux (PubMed:14570867). May regulate cellular ceramide homeostasis during keratinocyte differentiation (PubMed:12925201). Involved in lipid raft organization and CD1D localization on thymocytes and antigen-presenting cells, which plays an important role in natural killer T-cell development and activation (By similarity). Plays a role in phagocytosis of apoptotic cells by macrophages (By similarity). Macrophage phagocytosis is stimulated by APOA1 or APOA2, probably by stabilization of ABCA7 (By similarity). Also involved in phagocytic clearance of amyloid-beta by microglia cells and macrophages (By similarity). Further limits amyloid-beta production by playing a role in the regulation of amyloid-beta A4 precursor protein (APP) endocytosis and/or processing (PubMed:26260791). Amyloid-beta is the main component of amyloid plaques found in the brains of Alzheimer patients (PubMed:26260791).
Cellular Location	Cell membrane; Multi-pass membrane protein. Golgi apparatus membrane {ECO:0000250|UniProtKB:Q91V24}; Multi-pass membrane protein. Early endosome membrane {ECO:0000250|UniProtKB:Q91V24}; Multi-pass membrane protein. Cytoplasm {ECO:0000250|UniProtKB:Q91V24}. Cell projection, ruffle membrane {ECO:0000250|UniProtKB:Q91V24}. Cell projection, phagocytic cup {ECO:0000250|UniProtKB:Q91V24} Note=Localizes to cell membrane ruffles and phagocytic cups of macrophages stimulated with C1q or apoptotic cells. Localizes to the cytoplasm of resting macrophages, probably in Golgi and endosomes Localizes to the apical brush border of cells in the proximal tubules of kidney (By similarity). {ECO:0000250|UniProtKB:Q91V24}
Tissue Location	Expressed in leukocytes (at protein level) (PubMed:10873640). Widely expressed (PubMed:10873640). Highly expressed in myelo-lymphatic tissues including peripheral leukocytes, thymus, spleen and bone marrow (PubMed:10873640, PubMed:11435699). Expressed in the hippocampus and the cerebellum (PubMed:27472885). Isoform 2: Abundant in lymph node, spleen, thymus and trachea (PubMed:14592415) Isoform 1: Strongly expressed in brain and bone marrow (PubMed:14592415).

Background

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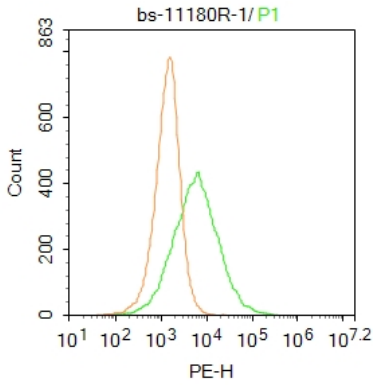
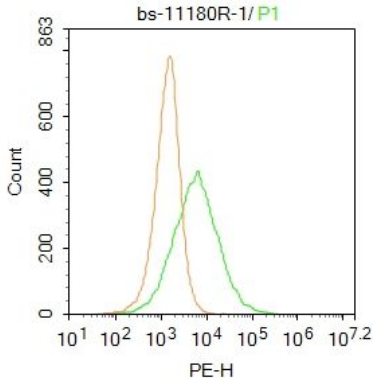
Images



Blank control: Hela.
Primary Antibody (green line): Rabbit Anti-ABCA7 antibody (AP54416)
Dilution: 1 µg /10^6 cells;
Isotype Control Antibody (orange line): Rabbit IgG .
Secondary Antibody : Goat anti-rabbit IgG-PE
Dilution: 1 µg /test.
Protocol
The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 20% PBST for 20 min atroom temperature. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



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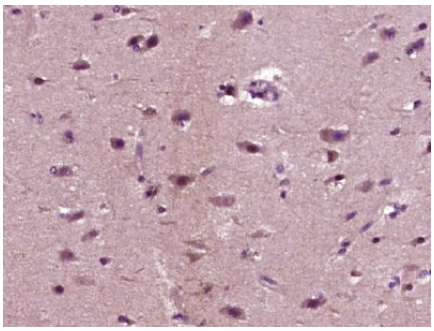

Paraformaldehyde-fixed, paraffin embedded (human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ABCA7) Polyclonal Antibody, Unconjugated (AP54416) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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