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ABCA1 Rabbit pAb

Catalog # AP97233

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O95477
Other Accession	O95477
Reactivity	Human
Predicted	Rat, Pig, Mouse, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	254302
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ABCA1
Epitope Specificity	1551-1650/2261
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 ABC transporter superfamily. ABCA family. Contains 2 ABC transporter domains.
SUBUNIT	Interacts with MEGF10.
Post-translational modifications	Phosphorylation on Ser-2054 regulates phospholipid efflux. Palmitoylation by DHHC8 is essential for membrane localization.
DISEASE	Defects in ABCA1 are a cause of high density lipoprotein deficiency type 1 (HDLD1) [MIM:205400]; also known as analphalipoproteinemia or Tangier disease (TGD). HDLD1 is a recessive disorder characterized by absence of high density lipoprotein (HDL) cholesterol from plasma, accumulation of cholesteryl esters, premature coronary artery disease (CAD), hepatosplenomegaly, recurrent peripheral neuropathy and progressive muscle wasting and weakness. Defects in ABCA1 are a cause of high density lipoprotein deficiency type 2 (HDLD2) [MIM:604091]; also known as familial hypoalphalipoproteinemia (FHA). HDLD2 is inherited as autosomal dominant trait. It is characterized by moderately low HDL cholesterol, predilection toward premature coronary artery disease (CAD) and a reduction in cellular cholesterol efflux.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The membrane-associated protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intracellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the ABC1 subfamily. Members of the ABC1 subfamily comprise the only major ABC subfamily found exclusively in multicellular eukaryotes. With cholesterol as its substrate, this protein functions as a cholesteral efflux pump in the cellular lipid removal pathway. Mutations in both alleles of this gene cause Tangier disease and familial high-density lipoprotein (HDL) deficiency. [provided by RefSeq, Sep 2019]

Additional Information

Gene ID	19
Other Names	ABC-1; ABC1; CERP; HDLCQTL13; HDLDT1; HPALP1; TGD; ABCA1_HUMAN; ABCA1; ATP-binding cassette sub-family A member 1; ATP-binding cassette transporter 1 (ABC-1 | ATP-binding cassette 1); Cholesterol efflux regulatory protein; 7.6.2.1; ABCA1_MOUSE; ATP binding cassette subfamily A member 1; ATP-binding cassette, sub-family A (ABC1), member 1; Tangier disease
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	ABCA1 (HGNC:29)
Synonyms	ABC1, CERP
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, PubMed:35974019). Thereby, participates in phospholipid transfer to apolipoproteins to form nascent high density lipoproteins/HDLs (PubMed:14754908). Transports preferentially phosphatidylcholine over phosphatidylserine (PubMed:24097981). May play a similar role in the efflux of intracellular cholesterol to apolipoproteins and the formation of nascent high density lipoproteins/HDLs (PubMed:10533863, PubMed:14754908, PubMed:24097981, PubMed:35974019). Translocates phospholipids from the outer face of the plasma membrane and forces it through its gateway and annulus into an elongated hydrophobic tunnel in its extracellular domain (PubMed:35974019).
Cellular Location	Cell membrane; Multi-pass membrane protein. Endosome
Tissue Location	Widely expressed, but most abundant in macrophages.

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