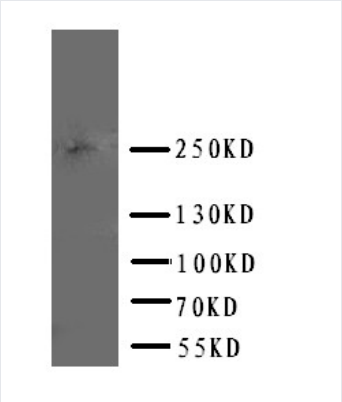
ABCA4 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ABCA4, Polyclonal Antibody
Full Product Name	Anti-ABCA4 antibody
Product Gene Name	anti-ABCA4 antibody
Product Synonym Names	Retinal-specific ATP-binding cassette transporter; ATP-binding cassette, sub-family A(ABC1), member 4; ABC 10 antibody; ABC A4 antibody; ABC10 antibody; ABCA 4 antibody; abcA4 antibody; ABCA4_HUMAN antibody; ABCR antibody; ARMD 2 antibody; ARMD2 antibody; ATP binding cassette 10 antibody; ATP binding cassette sub family A member 4 antibody; ATP binding cassette sub family A member4 antibody; ATP binding cassette transporter antibody; ATP binding cassette transporter retinal specific antibody; ATP binding cassette, sub family A(ABC1), member 4 antibody; ATP binding cassette, sub family A(ABC1), member4 antibody; ATP binding cassette10 antibody; ATP binding transporter, retina specific antibody; ATP-binding cassette sub-family A member 4 antibody; CORD 3 antibody; CORD3 antibody; DKFZp781N1972 antibody; FFM antibody; FLJ17534 antibody; Photoreceptor rim protein antibody; Retina specific ABC transporter antibody; Retinal specific ATP binding cassette transporter antibody; Retinal-specific ATP-binding cassette transporter antibody; RIM ABC transporter antibody; RIM protein antibody; RmP antibody; RP 19 antibody; RP19 antibody; Stargardt disease protein antibody; STGD antibody; STGD1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Lyophilized
Purity/Purification	Immunogen affinity purified.
Specificity	No cross reactivity with other proteins.
Preparation and Storage	At -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.
OMIM	604116
3D Structure	ModBase 3D Structure for P78363
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human ABCA4 (1893-1906aa TLLVQRHFFLSQWI).
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-ABCA4 antibody	Western Blot (WB)

Application Notes for anti-ABCA4 antibody	Western Blot: Concentration: 0.1-0.5ug/ml Tested Species: Hu Tested Species: In-house tested species with positive results. Predicted Species: Species predicted to be fit for the product based on sequence similarities. Other applications have not been tested. Optimal dilutions should be determined by end users.
Related Product Information for anti-ABCA4 antibody	**Description:** Rabbit IgG polyclonal antibody for Retinal-specific ATP-binding cassette transporter(ABCA4) detection. Tested with WB in Human. **Background:** ABCA4(ATP-Binding Cassette, Subfamily A, Member 4), also known as ABCR, is a protein which in humans is encoded by the ABCA4 gene. ABCA4 is a member of the ATP-binding cassette transporter gene sub-family A(ABC1) found exclusively in multicellular eukaryotes. Using a whole genome radiation hybrid panel, Allikmets et al.(1997) mapped the ABCR gene to 1p21-p13. Allikmets et al.(1997) localized ABCR transcripts exclusively within photoreceptor cells, indicating that ABCR mediates the transport of an essential molecule(or ion) either into or out of photoreceptor cells. Molday et al.(2000) showed by immunofluorescence microscopy and Western blot analysis that ABCR is present in foveal and peripheral cone, as well as rod, photoreceptors. The results suggested that the loss in central vision experienced by patients with Stargardt macular dystrophy arises directly from ABCR-mediated foveal cone degeneration.
Other Notes	Small volumes of anti-ABCA4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ABCA4 purchase	MBS176289 is an antibody targeting ABCA4. Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-ABCA4 antibody
Anti-ABCA4 antibody, MBS176289, Western blottingWB: U87 Cell Lysate

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ABCA4. It may not necessarily be applicable to this product.

NCBI GI #	6707663
NCBI GeneID	24
NCBI Accession #	P78363.3
UniProt Primary Accession #	P78363
UniProt Secondary Accession #	O15112; O60438; O60915; Q0QD48; Q4LE31
UniProt Related Accession #	P78363
NCBI Official Full Name	Retinal-specific ATP-binding cassette transporter
NCBI Official Synonym Full Names	ATP-binding cassette, sub-family A (ABC1), member 4
NCBI Official Symbol	ABCA4

NCBI Official Synonym Symbols	FFM; RMP; ABCR; RP19; STGD; ABC10; ARMD2; CORD3; STGD1
UniProt Protein Name	Retinal-specific ATP-binding cassette transporter
UniProt Synonym Protein Names	ATP-binding cassette sub-family A member 4; RIM ABC transporter; RIM protein; RmP; Stargardt disease protein
Protein Family	ABC transporter A family
UniProt Gene Name	ABCA4
UniProt Synonym Gene Names	ABCR; RIM protein; RmP
UniProt Entry Name	ABCA4_HUMAN
NCBI Protein Information	retinal-specific ATP-binding cassette transporter; RIM protein; RIM ABC transporter; photoreceptor rim protein; stargardt disease protein; retina-specific ABC transporter; ATP binding cassette transporter; ATP-binding transporter, retina-specific; ATP-binding cassette sub-family A member 4; ATP-binding cassette transporter, retinal-specific
NCBI Summary for ABCA4	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. This protein is a retina-specific ABC transporter with N-retinylidene-PE as a substrate. It is expressed exclusively in retina photoreceptor cells, indicating the gene product mediates transport of an essental molecule across the photoreceptor cell membrane. Mutations in this gene are found in patients diagnosed with Stargardt disease, a form of juvenile-onset macular degeneration. Mutations in this gene are also associated with retinitis pigmentosa-19, cone-rod dystrophy type 3, early-onset severe retinal dystrophy, fundus flavimaculatus, and macular degeneration age-related 2. [provided by RefSeq, Jul 2008]

UniProt Comments for ABCA4	ABCA4: In the visual cycle, acts as an inward-directed retinoid flipase, retinoid substrates imported by ABCA4 from the extracellular or intradiscal (rod) membrane surfaces to the cytoplasmic membrane surface are all-trans-retinaldehyde (ATR) and N-retinyl-phosphatidyl-ethanolamine (NR-PE). Once transported to the cytoplasmic surface, ATR is reduced to vitamin A by trans- retinol dehydrogenase (tRDH) and then transferred to the retinal pigment epithelium (RPE) where it is converted to 11-cis-retinal. May play a role in photoresponse, removing ATR/NR-PE from the extracellular photoreceptor surfaces during bleach recovery. Defects in ABCA4 are the cause of Stargardt disease type 1 (STGD1). STGD is one of the most frequent causes of macular degeneration in childhood. It is characterized by macular dystrophy with juvenile-onset, rapidly progressive course, alterations of the peripheral retina, and subretinal deposition of lipofuscin-like material. STGD1 inheritance is autosomal recessive. Defects in ABCA4 are the cause of fundus flavimaculatus (FFM). FFM is an autosomal recessive retinal disorder very similar to Stargardt disease. In contrast to Stargardt disease, FFM is characterized by later onset and slowly progressive course. Defects in ABCA4 may be a cause of age-related macular degeneration type 2 (ARMD2). ARMD is a multifactorial eye disease and the most common cause of irreversible vision loss in the developed world. In most patients, the disease is manifest as ophthalmoscopically visible yellowish accumulations of protein and lipid (known as drusen) that lie beneath the retinal pigment epithelium and within an elastin-containing structure known as Bruch membrane. Defects in ABCA4 are the cause of cone-rod dystrophy type 3 (CORD3). CORDs are inherited retinal dystrophies belonging to the group of pigmentary retinopathies. CORDs are characterized by retinal pigment deposits visible on fundus examination, predominantly in the macular region, and initial loss of cone photoreceptors followed by rod degeneration. This leads to decreased visual acuity and sensitivity in the central visual field, followed by loss of peripheral vision. Severe loss of vision occurs earlier than in retinitis pigmentosa. Defects in ABCA4 are the cause of retinitis pigmentosa type 19 (RP19). RP leads to degeneration of retinal photoreceptor cells. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well. RP19 is characterized by choroidal atrophy. Inheritance is autosomal recessive. Belongs to the ABC transporter superfamily. ABCA family. Protein type: Membrane protein, multi-pass; Transporter, ABC family; Membrane protein, integral; Transporter Chromosomal Location of Human Ortholog: 1p22 Cellular Component: membrane; integral to plasma membrane Molecular Function: phospholipid-translocating ATPase activity; transporter activity; ATPase activity, coupled to transmembrane movement of substances; ATP binding Biological Process: phospholipid translocation; phototransduction, visible light; phospholipid transfer to membrane; visual perception; transport; photoreceptor cell maintenance; retinoid metabolic process; transmembrane transport Disease: Macular Degeneration, Age-related, 2; Cone-rod Dystrophy 3; Retinitis Pigmentosa 19; Stargardt Disease 1
Research Articles on ABCA4	**1.** This study confirms that ABCA4 mutations lead to a spectrum of retinal degenerations.
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