

# ABCA7 (M-70): sc-50525

## BACKGROUND

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.

## REFERENCES

1. Kaminski, W.E., et al. 2000. Genomic organization of the human cholesterol-responsive ABC transporter ABCA7: tandem linkage with the minor histocompatibility antigen HA-1 gene. *Biochem. Biophys. Res. Commun.* 278: 782-789.
2. Broccardo, C., et al. 2001. Comparative analysis of the promoter structure and genomic organization of the human and mouse ABCA7 gene encoding a novel ABCA transporter. *Cytogenet. Cell Genet.* 92: 264-270.
3. Ikeda, Y., et al. 2003. Posttranscriptional regulation of human ABCA7 and its function for the apoA-I-dependent lipid release. *Biochem. Biophys. Res. Commun.* 311: 313-318.
4. Kielar, D., et al. 2003. Adenosine triphosphate binding cassette (ABC) transporters are expressed and regulated during terminal keratinocyte differentiation: a potential role for ABCA7 in epidermal lipid reorganization. *J. Invest. Dermatol.* 121: 465-474.

## CHROMOSOMAL LOCATION

Genetic locus: Abca7 (mouse) mapping to 10 C1.

## SOURCE

ABCA7 (M-70) is a rabbit polyclonal antibody raised against amino acids 2031-2100 mapping near the C-terminus of ABCA7 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

ABCA7 (M-70) is recommended for detection of ABCA7, isoforms a and b of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ABCA7 siRNA (m): sc-45432, ABCA7 shRNA Plasmid (m): sc-45432-SH and ABCA7 shRNA (m) Lentiviral Particles: sc-45432-V.

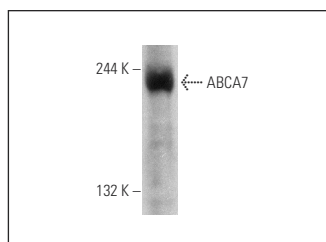
Molecular Weight of ABCA7: 251 kDa.

Positive Controls: rat thymus extract: sc-2401.

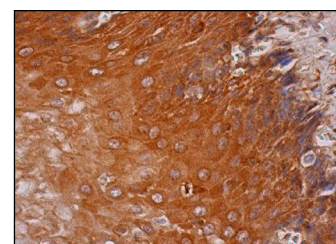
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



ABCA7 (M-70): sc-50525. Western blot analysis of ABCA7 expression in human PBL whole cell lysate.



ABCA7 (M-70): sc-50525. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **ABCA7 (7A1-144): sc-130576**, our highly recommended monoclonal alternative to ABCA7 (M-70).