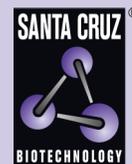


ABCA7 (E-11): sc-377335



The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: ABCA7 (human) mapping to 19p13.3.

SOURCE

ABCA7 (E-11) is a mouse monoclonal antibody raised against amino acids 2009-2146 mapping at the C-terminus of ABCA7 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ABCA7 (E-11) is available conjugated to agarose (sc-377335 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377335 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377335 PE), fluorescein (sc-377335 FITC), Alexa Fluor® 488 (sc-377335 AF488), Alexa Fluor® 546 (sc-377335 AF546), Alexa Fluor® 594 (sc-377335 AF594) or Alexa Fluor® 647 (sc-377335 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377335 AF680) or Alexa Fluor® 790 (sc-377335 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

ABCA7 (E-11) is recommended for detection of ABCA7, isoforms a and b of human origin by Western Blotting (starting dilution 1:100, 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 (h): sc-45431, ABCA7 shRNA Plasmid (h): sc-45431-SH and ABCA7 shRNA (h) Lentiviral Particles: sc-45431-V.

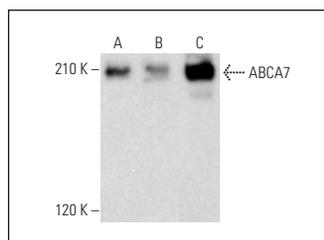
Molecular Weight of ABCA7: 251 kDa.

Positive Controls: NCI-H929 whole cell lysate: sc-364786, CCRF-CEM cell lysate: sc-2225 or K-562 whole cell lysate: sc-2203.

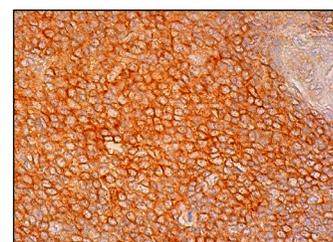
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ABCA7 (E-11): sc-377335. Western blot analysis of ABCA7 expression in CCRF-CEM (A), K-562 (B) and NCI-H929 (C) whole cell lysates.



ABCA7 (E-11): sc-377335. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of cells in white pulp and cells in red pulp.

SELECT PRODUCT CITATIONS

1. Lyssenko, N.N. and Praticò, D. 2021. ABCA7 and the altered lipidostasis hypothesis of Alzheimer's disease. *Alzheimers Dement.* 17: 164-174.
2. Picataggi, A., et al. 2022. Specificity of ABCA7-mediated cell lipid efflux. *Biochim. Biophys. Acta Mol. Cell Biol. Lipids* 1867: 159157.

RESEARCH USE

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