

ABC1 (AB.H10): sc-58219

BACKGROUND

ABC1 (for ATP-binding cassette transporter 1) is a member of the family of ATP-binding cassette proteins which transport various molecules across biological membranes. ABC1 contains 2 characteristic ATP-binding domains and 12 transmembrane domains which form a channel-like structure for transport. Mutations in the ABC1 gene are implicated in Tangier disease, characterized by low serum high density lipoprotein. ABC1 is widely expressed in human tissues, with high levels of expression in liver, lung, adrenal glands, placenta and fetal tissue. ABC1 expression is induced during monocyte differentiation and upregulated in the presence of acetylated low-density lipoprotein. ABC1 may have a dual regulatory function in macrophage lipid metabolism and inflammation.

REFERENCES

- Decottignies, A. and Goffeau, A. 1997. Complete inventory of the yeast ABC proteins. *Nat. Genet.* 15: 137-145.
- Schwiebert, E.M. 1999. ABC transporter-facilitated ATP conductive transport. *Am. J. Physiol.* 276: C1-C8.

CHROMOSOMAL LOCATION

Genetic locus: ABCA1 (human) mapping to 9q31.1; Abca1 (mouse) mapping to 4 B2.

SOURCE

ABC1 (AB.H10) is a mouse monoclonal antibody raised against amino acids 1800-2260 of ABC1 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ABC1 (AB.H10) is recommended for detection of ABC1 of mouse, rat and human 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ABC1 siRNA (h): sc-41136, ABC1 siRNA (m): sc-41137, ABC1 shRNA Plasmid (h): sc-41136-SH, ABC1 shRNA Plasmid (m): sc-41137-SH, ABC1 shRNA (h) Lentiviral Particles: sc-41136-V and ABC1 shRNA (m) Lentiviral Particles: sc-41137-V.

Molecular Weight of ABC1: 220 kDa.

Positive Controls: MES-SA/Dx5 cell lysate: sc-2284, U-87 MG cell lysate: sc-2411 or WI-38 whole cell lysate: sc-364260.

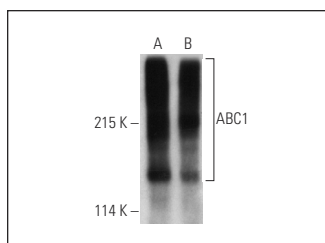
STORAGE

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

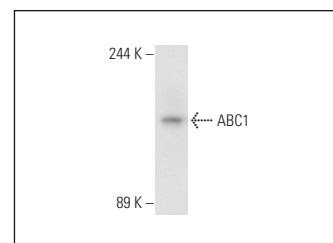
RESEARCH USE

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

DATA



ABC1 (AB.H10): sc-58219. Western blot analysis of ABC1 expression in U-87 MG (A) and WI-38 (B) whole cell lysates.



ABC1 (AB.H10): sc-58219. Western blot analysis of ABC1 expression in MES-SA/Dx5 whole cell lysate.

SELECT PRODUCT CITATIONS

- Geeraert, B., et al. 2007. Oxidized low-density lipoprotein-induced expression of ABCA1 in blood monocytes precedes coronary atherosclerosis and is associated with plaque complexity in hypercholesterolemic pigs. *J. Thromb. Haemost.* 5: 2529-2536.
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- Okoro, E.U., et al. 2012. Apolipoprotein E4 is deficient in inducing macrophage ABCA1 expression and stimulating the Sp1 signaling pathway. *PLoS ONE* 7: e44430.
- Chen, J.H., et al. 2013. *Hibiscus sabdariffa* leaf polyphenolic extract inhibits LDL oxidation and foam cell formation involving up-regulation of LXRA/ABCA1 pathway. *Food Chem.* 141: 397-406.
- Palme, N., et al. 2014. Immunolocalization of the cholesterol transporters ABCA1 and ABCG1 in canine reproductive tract tissues and spermatozoa. *Reprod. Domest. Anim.* 49: 441-447.
- Okoro, E.U., et al. 2015. A subregion of reelin suppresses lipoprotein-induced cholesterol accumulation in macrophages. *PLoS ONE* 10: e0136895.
- Robertson, C.L., et al. 2015. Astrocyte elevated gene-1 (AEG-1) regulates lipid homeostasis. *J. Biol. Chem.* 290: 18227-18236.
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PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.