SANTA CRUZ BIOTECHNOLOGY, INC.

ABC1 (Y-15): sc-5490

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 has a predicted molecular mass of 220 kDa and is widely expressed in human tissues. High levels of expression are found 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

1. Decottignies, A. and Goffeau, A. 1997. Complete inventory of the yeast ABC proteins. Nat. Genet. 15: 137-145.
2. Schwiebert, E.M. 1999. ABC transporter-facilitated ATP conductive transport. Am. J. Physiol. 276: C1-C8.
3. Remaley, A.T., et al. 1999. Human ATP-binding cassette transporter 1 (ABC1): genomic organization and identification of the genetic defect in the original Tangier disease kindred. Proc. Natl. Acad. Sci. USA 96: 12685-12690.
4. Rust, S., et al. 1999. Tangier disease is caused by mutations in the gene encoding ATP-binding cassette transporter 1. Nat. Genet. 22: 352-355.
5. Langmann, T., et al. 1999. Molecular cloning of the human ATP-binding cassette transporter 1 (hABC1): evidence for sterol-dependent regulation in macrophages. Biochem. Biophys. Res. Commun. 257: 29-33.
6. Orso, E., et al. 2000 Transport of lipids from golgi to plasma membrane is defective in tangier disease patients and ABC 1-deficient mice. Nat. Genet. 24: 192-196.
7. Schmitz, G., et al. 2000. ATP-binding cassette transporter A1 (ABCA1) in macrophages: a dual function in inflammation and lipid metabolism? Pathobiology 67: 236-240.

CHROMOSOMAL LOCATION

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

SOURCE

ABC1 (Y-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ABC1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5490 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ABC1 (Y-15) 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), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ABC1 (Y-15) is also recommended for detection of ABC1 in additional species, including equine, canine, bovine, porcine and avian.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **ABC1 (AB.H10): sc-58219**, our highly recommended monoclonal aternative to ABC1 (Y-15).