SANTA CRUZ BIOTECHNOLOGY, INC.

ABCA12 (H-300): sc-134467

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The ATP binding cassette (ABC) transporters, or traffic ATPases, constitute an expansive family of proteins accountable for the transport of a wide variety of substrates across cell membranes in both prokaryotic and eukaryotic cells. They also aid in the regulation of lipid transport and membrane trafficking. ABCA12 (ATP-binding cassette, subfamily A, member 12) contains two transmembrane (TM) domains, each with six membrane-spanning segments and two nucleotide-binding domains (NBDs), which are located in the cytoplasm. ABCA12 is expressed in normal human keratinocytes (RT-PCR reveals expression in placenta, testis, fetal brain and skin) and is upregulated during keratinization. Immunoelectron microscopy reveals that the ABCA12 protein is located in lamellar granules in the upper epidermal keratinocytes of human skin. The ABCA12 gene, which synthesizes a 2,595 amino acid protein, may produce an alternative splice variant with an in-frame deletion leading to truncation of 79 amino acids.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607800. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Annilo, T., et al. 2003. Identification and characterization of a novel ABCA subfamily member, ABCA12, located in the lamellar ichthyosis region on 2q34. Cytogenet. Genome Res. 98: 169-176.
3. Lefevre, C., et al. 2003. Mutations in the transporter ABCA12 are associated with lamellar ichthyosis type 2. Hum. Mol. Genet. 12: 2369-2378.
4. Akiyama, M., et al. 2005. Mutations in lipid transporter ABCA12 in harlequin ichthyosis and functional recovery by corrective gene transfer. J. Clin. Invest. 115: 1777-1784.
5. Kelsell, D.P., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. Am. J. Hum. Genet. 76: 794-803.
6. Akiyama, M., et al. 2006. Compound heterozygous mutations including a *de novo* missense mutation in ABCA12 led to a case of harlequin ichthyosis with moderate clinical severity. J. Invest. Dermatol. 126: 1518-1523.

CHROMOSOMAL LOCATION

Genetic locus: ABCA12 (human) mapping to 2q35; Abca12 (mouse) mapping to 1 C3.

SOURCE

ABCA12 (H-300) is a rabbit polyclonal antibody raised against amino acids 341-640 mapping within an internal region of ABCA12 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.

STORAGE

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

APPLICATIONS

ABCA12 (H-300) is recommended for detection of ABCA12 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), 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).

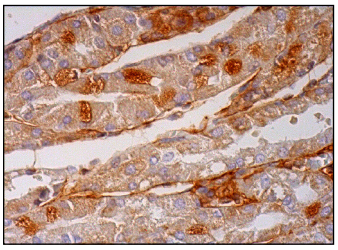
Suitable for use as control antibody for ABCA12 siRNA (h): sc-60109, ABCA12 siRNA (m): sc-60110, ABCA12 shRNA Plasmid (h): sc-60109-SH, ABCA12 shRNA Plasmid (m): sc-60110-SH, ABCA12 shRNA (h) Lentiviral Particles: sc-60109-V and ABCA12 shRNA (m) Lentiviral Particles: sc-60110-V.

Molecular Weight of ABCA12: 293 kDa.

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



ABCA12 (H-300): sc-134467. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic and membrane staining of glandular cells.

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.