SANTA CRUZ BIOTECHNOLOGY, INC.

ABCG2 (H-70): sc-25821

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ATP-binding cassette (ABC) transporters are an evolutionarily conserved family of proteins that catalyze the transport of molecules across extracellular and intracellular membranes through the energy of ATP hydrolysis. The ABC half-transporter, ABCG2, is also known as placenta-specific ABC transporter and breast cancer resistance protein (BCRP1). ABCG2 confers resistance for a variety of chemotherapeutic agents, including anthracyclines, mitoxantrone, bisantrene and topotecan. Under normal conditions, ABCG2 may serve a protective function by removing toxins from the cell, and plays an important role in regulating stem cell differentiation. ABCG2 is responsible for the side population (SP) phenotype and is widely expressed in a large variety of stem cells, making it an important stem cell marker. ABCG2 may have N-linked glycosylation and may dimerize *in vivo*. ABCG2 is abundantly expressed in placenta, liver, intestine and stem cells.

REFERENCES

1. Spangrude, G.J., et al. 1990. Resting and activated subsets of mouse multipotent hematopoietic stem cells. Proc. Natl. Acad. Sci. USA 87: 7433-7437.
2. Goodell, M.A., et al. 1997. Dye efflux studies suggest that hematopoietic stem cells expressing low or undetectable levels of CD34 antigen exist in multiple species. Nat. Med. 3: 1337-1345.
3. Hulspas, R., et al. 2000. Characterization of neurosphere cell phenotypes by flow cytometry. Cytometry 40: 245-250.

CHROMOSOMAL LOCATION

Genetic locus: ABCG2 (human) mapping to 4q22.1.

SOURCE

ABCG2 (H-70) is a rabbit polyclonal antibody raised against amino acids 301-370 mapping within an internal region of ABCG2 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.

APPLICATIONS

ABCG2 (H-70) is recommended for detection of ABCG2 of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ABCG2 siRNA (h): sc-41151, ABCG2 shRNA Plasmid (h): sc-41151-SH and ABCG2 shRNA (h) Lentiviral Particles: sc-41151-V.

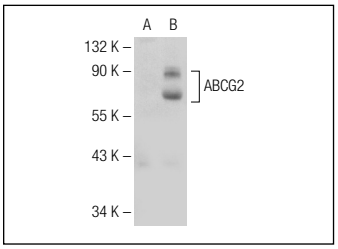
Molecular Weight of ABCG2: 72 kDa.

Positive Controls: ABCG2 (h2): 293T Lysate: sc-172393, JAR cell lysate: sc-2276 or human small intestine extract: sc-364225.

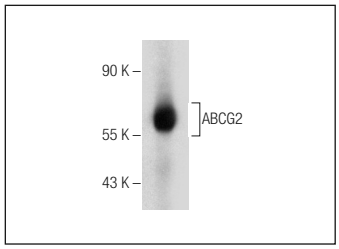
RECOMMENDED SECONDARY REAGENTS

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 MarkerTM compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz MarkerTM 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 UltraCruzTM Mounting Medium: sc-24941.

DATA



ABCG2 (H-70): sc-25821. Western blot analysis of ABCG2 expression in non-transfected: sc-117752 (**A**) and human ABCG2 transfected: sc-172393 (**B**) 293T whole cell lysates.



ABCG2 (H-70): sc-25821. Western blot analysis of ABCG2 expression in human small intestine tissue extract.

SELECT PRODUCT CITATIONS

1. Lyngholm, M., et al. 2008. Immunohistochemical markers for corneal stem cells in the early developing human eye. Exp. Eye Res. 87: 115-121.
2. Singh, R.R., et al. 2011. ABCG2 is a direct transcriptional target of hedgehog signaling and involved in stroma-induced drug tolerance in diffuse large B-cell lymphoma. Oncogene 30: 4874-4886.

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.