SANTA CRUZ BIOTECHNOLOGY, INC.

ABCG2 (D-20): sc-25156

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.

CHROMOSOMAL LOCATION

Genetic locus: Abcg2 (mouse) mapping to 6 B3.

SOURCE

ABCG2 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ABCG2 of mouse 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-25156 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

ABCG2 (D-20) is recommended for detection of ABCG2 of mouse and rat 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 (m): sc-37054, ABCG2 shRNA Plasmid (m): sc-37054-SH and ABCG2 shRNA (m) Lentiviral Particles: sc-37054-V.

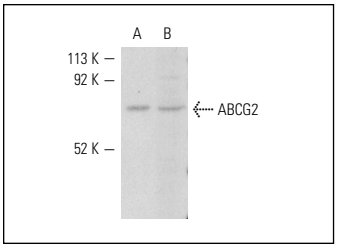
Molecular Weight of ABCG2: 72 kDa.

Positive Controls: mouse brain extract: sc-2253, mouse kidney extract: sc-2255 or mouse embryo extract: sc-364239.

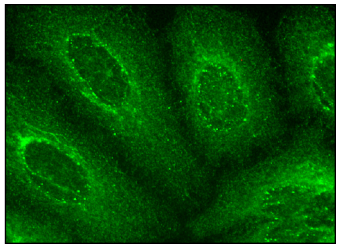
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



ABCG2 (D-20): sc-25156. Western blot analysis of ABCG2 expression in mouse kidney (**A**) and mouse embryo (**B**) tissue extracts.



ABCG2 (D-20): sc-25156. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Ma, X.B., et al. 2009. Expression and role of Notch signalling in the regeneration of rat tracheal epithelium. Cell Prolif. 42: 15-28.
2. Jin, Q.R., et al. 2009. Decreased urinary secretion of belotecan in folic acid-induced acute renal failure rats due to down-regulation of Oat1 and Bcrp. Xenobiotica 39: 711-721.
3. Florian, M., et al. 2009. Oxytocin increases glucose uptake in neonatal rat cardiomyocytes. Endocrinology 151: 482-491.
4. Liu, X., et al. 2011. Insulin suppresses the expression and function of breast cancer resistance protein in primary cultures of rat brain microvessel endothelial cells. Pharmacol. Rep. 63: 487-493.
5. Farley, S.M., et al. 2012. Vitamin E decreases extra-hepatic menaquinone-4 concentrations in rats fed menadione or phylloquinone. Mol. Nutr. Food Res. 56: 912-922.

PROTOCOLS

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