SANTA CRUZ BIOTECHNOLOGY, INC.

RhBG (B-9): sc-398816

BACKGROUND

RhBG (Rh family, B glycoprotein), also known as ammonium transporter Rh type B or SLC42A2, is a 441 amino acid multi-pass membrane protein and ammonium transporter belonging to the ammonium transporter (TC 2.A.49) family. As one of two non-erythroid members of the Rhesus (Rh) protein subfamily, RhBG exists as five alternatively spliced isoforms and is expressed at highest levels in kidney where it localizes to the epithelial linings of convoluted tubules and loops of Henle; lower levels are found in liver and ovary. RhBG interacts with Ankyrin G and requires a *cis*-tyrosine-based signal to anchor itself to the basolateral cell membrane of kidney epithelial cells where it facilitates ammonium transport. Subject to post-translational N-terminal glycosylation, RhBG contains 12 transmembrane domains and is encoded by a gene mapping to human chromosome 1q22.

REFERENCES

1. Liu, Z., et al. 2001. Rh type B glycoprotein is a new member of the Rh superfamily and a putative ammonia transporter in mammals. J. Biol. Chem. 276: 1424-1433.
2. Ludewig, U. 2004. Electroneutral ammonium transport by basolateral rhesus B glycoprotein. J. Physiol. 559: 751-759.
3. Khademi, S., et al. 2004. Mechanism of ammonia transport by Amt/MEP/Rh: structure of AmtB at 1.35 A. Science 305: 1587-1594.
4. Zidi-Yahiaoui, N., et al. 2005. Human Rhesus B and Rhesus C glycoproteins: properties of facilitated ammonium transport in recombinant kidney cells. Biochem. J. 391: 33-40.
5. Lopez, C., et al. 2005. The ammonium transporter RhBG: requirement of a tyrosine-based signal and ankyrin-G for basolateral targeting and membrane anchorage in polarized kidney epithelial cells. J. Biol. Chem. 280: 8221-8228.

CHROMOSOMAL LOCATION

Genetic locus: RHBG (human) mapping to 1q22; Rhbg (mouse) mapping to 3 F1.

SOURCE

RhBG (B-9) is a mouse monoclonal antibody raised against amino acids 337-408 mapping within an internal region of RhBG of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RhBG (B-9) is available conjugated to agarose (sc-398816 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398816 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398816 PE), fluorescein (sc-398816 FITC), Alexa Fluor® 488 (sc-398816 AF488), Alexa Fluor® 546 (sc-398816 AF546), Alexa Fluor® 594 (sc-398816 AF594) or Alexa Fluor® 647 (sc-398816 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398816 AF680) or Alexa Fluor® 790 (sc-398816 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

RhBG (B-9) is recommended for detection of RhBG of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 RhBG siRNA (h): sc-88606, RhBG siRNA (m): sc-152849, RhBG shRNA Plasmid (h): sc-88606-SH, RhBG shRNA Plasmid (m): sc-152849-SH, RhBG shRNA (h) Lentiviral Particles: sc-88606-V and RhBG shRNA (m) Lentiviral Particles: sc-152849-V.

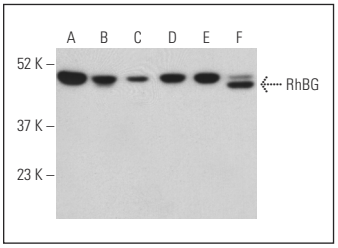
Molecular Weight of RhBG: 50 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, c4 whole cell lysate: sc-364186 or Caki-1 cell lysate: sc-2224.

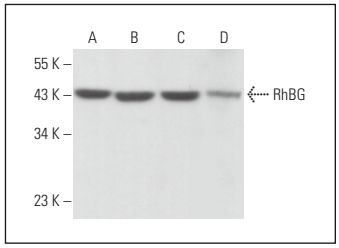
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RhBG (B-9): sc-398816. Western blot analysis of RhBG expression in Caki-1 (**A**), Caco-2 (**B**), Hep G2 (**C**), RT-4 (**D**), c4 (**E**) and NIH/3T3 (**F**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



RhBG (B-9): sc-398816. Western blot analysis of RhBG expression in Caki-1 (**A**), c4 (**B**) and NIH/3T3 (**C**) whole cell lysates and human cerebellum tissue extract (**D**).

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 for detailed protocols and support products.