SANTA CRUZ BIOTECHNOLOGY, INC.

RhBG (C-12): sc-160734

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 1q21.3.

REFERENCES

1. Liu, Z., et al. 2001. Rh type B glyco-protein 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.
6. Huang, C.H. and Peng, J. 2005. Evolutionary conservation and diversification of Rh family genes and proteins. Proc. Natl. Acad. Sci. USA 102: 15512-15517.

CHROMOSOMAL LOCATION

Genetic locus: RHBG (human) mapping to 1q21.3.

SOURCE

RhBG (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of RhBG 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-160734 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

RhBG (C-12) is recommended for detection of RhBG 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 RhBG siRNA (h): sc-88606, RhBG shRNA Plasmid (h): sc-88606-SH and RhBG shRNA (h) Lentiviral Particles: sc-88606-V.

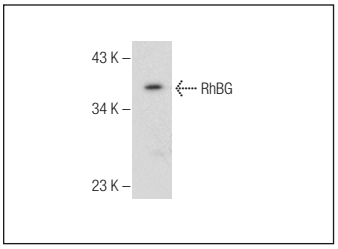
Molecular Weight of RhBG: 50 kDa.

Positive Controls: MEG-01 cell lysate: sc-2283.

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



RhBG (C-12): sc-160734. Western blot analysis of RhBG expression in MEG-01 whole cell lysate.

STORAGE

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