SANTA CRUZ BIOTECHNOLOGY, INC.

RhCG (CB-62): sc-100287

BACKGROUND

RhCG (Rhesus blood group family type C glycoprotein), also known as RHGK (Rh glycoprotein kidney), PDRC2 (tumor-related protein DRC2) or SLC42A3, is a multi-pass membrane protein with three potential N-glycosylation sites that belongs to the Rh subfamily of the ammonium transporter family. Expressed in a wide variety of tissues with predominant expression in adult and fetal kidney, RhCG localizes to the apical and/or basolateral cell membrane (depending on the species) and is believed to function as a non-erythroid, bidirectional, electroneutral ammonium transporter. Specifically, RhCG is found throughout the kidney in sites such as the CNT (connecting segment), the DCT (distal convoluted tubule), the collecting duct and the ICT (initial collecting tubule), that are major contributors to renal ammonia secretion. This suggests that RhCG plays an important role in renal ammonia metabolism.

REFERENCES

1. Liu, Z., et al. 2000. Characterization of human RhCG and mouse RhCG as novel nonerythroid Rh glycoprotein homologues predominantly expressed in kidney and testis. J. Biol. Chem. 275: 25641-25651.
2. Marini, A.M., et al. 2000. The human Rhesus-associated RhAG protein and a kidney homologue promote ammonium transport in yeast. Nat. Genet. 26: 341-344.

CHROMOSOMAL LOCATION

Genetic locus: RHCG (human) mapping to 15q26.1; Rhcg (mouse) mapping to 7 D3.

SOURCE

RhCG (CB-62) is a mouse monoclonal antibody raised against recombinant RhCG of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RhCG (CB-62) is recommended for detection of RhCG 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 RhCG siRNA (h): sc-90218, RhCG siRNA (m): sc-152850, RhCG shRNA Plasmid (h): sc-90218-SH, RhCG shRNA Plasmid (m): sc-152850-SH, RhCG shRNA (h) Lentiviral Particles: sc-90218-V and RhCG shRNA (m) Lentiviral Particles: sc-152850-V.

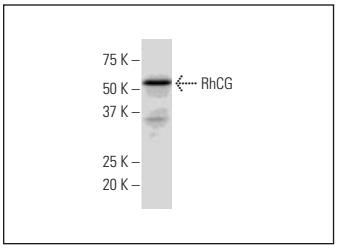
Molecular Weight of RhCG: 58 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

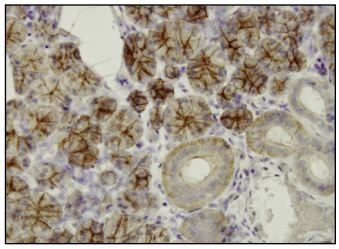
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RhCG (CB-62): sc-100287. Western blot analysis of RhCG expression in PC-12 whole cell lysate.



RhCG (CB-62): sc-100287. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human salivary gland tissue showing membrane localization.

SELECT PRODUCT CITATIONS

1. Izumi, Y., et al. 2011. Aldosterone requires vasopressin V1a receptors on intercalated cells to mediate acid-base homeostasis. J. Am. Soc. Nephrol. 22: 673-680.
2. Wang, D.G., et al. 2018. RHCG suppresses cervical cancer progression through inhibiting migration and inducing apoptosis regulated by TGF-β1. Biochem. Biophys. Res. Commun. 503: 86-93.

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.