

collectrin (h): 293T Lysate: sc-116311

BACKGROUND

Collectrin, also known as TMEM27 (transmembrane protein 27) or NX17, is a 222 amino acid single-pass type I membrane protein belonging to the TMEM27 family. Collectrin interacts with Snapin to regulate SNARE complex function, which in turn controls Insulin exocytosis. Collectrin has been found to stimulate β cell replication and plays a role in renal amino acid uptake. Localizing to luminal surface and cytoplasm of renal collecting ducts of the cortex and medulla, collectrin is also found in β cells of pancreatic islets, where its extracellular domain becomes cleaved following translation and is released from the cell membrane. Collectrin exists as a homodimer, undergoes post-translational glycosylation and interacts with XTRP2.

REFERENCES

1. Zhang, H., Wada, J., Kanwar, Y.S., Tsuchiyama, Y., Hiragushi, K., Hida, K., Shikata, K. and Makino, H. 1999. Screening for genes upregulated in 5/6 nephrectomized mouse kidney. *Kidney Int.* 56: 549-558.
2. Zhang, H., Wada, J., Hida, K., Tsuchiyama, Y., Hiragushi, K., Shikata, K., Wang, H., Lin, S., Kanwar, Y.S. and Makino, H. 2001. Collectrin, a collecting duct-specific transmembrane glycoprotein, is a novel homolog of ACE2 and is developmentally regulated in embryonic kidneys. *J. Biol. Chem.* 276: 17132-17139.
3. Fukui, K., Yang, Q., Cao, Y., Takahashi, N., Hatakeyama, H., Wang, H., Wada, J., Zhang, Y., Marselli, L., Nammo, T., Yoneda, K., Onishi, M., Higashiyama, S., Matsuzawa, Y., Gonzalez, F.J., Weir, G.C., Kasai, H., Shimomura, I., et al. 2005. The HNF-1 target collectrin controls Insulin exocytosis by SNARE complex formation. *Cell Metab.* 2: 373-384.
4. Danilczyk, U., Sarao, R., Remy, C., Benabbas, C., Stange, G., Richter, A., Arya, S., Pospisilik, J.A., Singer, D., Camargo, S.M., Makrides, V., Ramadan, T., Verrey, F., Wagner, C.A. and Penninger, J.M. 2006. Essential role for collectrin in renal amino acid transport. *Nature* 444: 1088-1091.
5. Mount, D.B. 2007. Collectrin and the kidney. *Curr. Opin. Nephrol. Hypertens.* 16: 427-429.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 300631. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Pasquali, L., d'Annunzio, G., Gastaldi, R., Di Battista, E., Calcaterra, V., Larizza, D., Lorini, R. and D'Amato, E. 2009. Collectrin gene screening in Turner syndrome patients with kidney malformation. *J. Genet.* 88 105-108.

CHROMOSOMAL LOCATION

Genetic locus: TMEM27 (human) mapping to Xp22.2.

PRODUCT

collectrin (h): 293T Lysate represents a lysate of human collectrin transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

collectrin (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive collectrin antibodies. Recommended use: 10-20 μ l per lane.

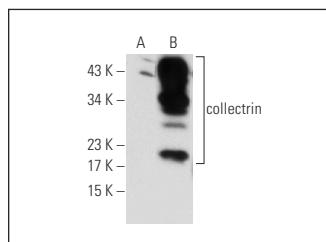
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

collectrin (I-14): sc-135464 is recommended as a positive control antibody for Western Blot analysis of enhanced human collectrin expression in collectrin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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 Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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.

DATA



collectrin (I-14): sc-135464. Western blot analysis of collectrin expression in non-transfected: sc-117752 (A) and human collectrin transfected: sc-116311 (B) 293T whole cell lysates.

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.