SANTA CRUZ BIOTECHNOLOGY, INC.

Prostasin (K-15): sc-27591

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Prostasin, a serine protease first identified in prostate tissue, activates epithelial sodium channels in a variety of tissues. Though typically a membrane-anchored protein, free Prostasin is also found in physiologic fluids and tissue culture media, indicating a mechanism for secretion from the cells as well. Aprotinin and other protease inhibitors suppress the channel-activating capacity of Prostasin, while aldosterone increases Prostasin expression and stimulates sodium uptake. In addition, DNA methylation negatively correlates with Prostasin expression in cancer cells, while enforced reexpression decreases invasiveness as well as metastatic potential, implying that Prostasin activity reflects epithelial cell physiology.

REFERENCES

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2. Narikiyo, T., Kitamura, K., Adachi, M., Miyoshi, T., Iwashita. K., Shiraishi, N., Nonoguchi, H., Chen, L.M., Chai, K.X., Chao. J. and Tomita, K. 2002. Regulation of Prostasin by aldosterone in the kidney. J. Clin. Invest. 109: 401-408.
3. Chen, L.M. and Chai, K.X. 2002. Prostasin serine protease inhibits breast cancer invasiveness and is transcriptionally regulated by promoter DNA methylation. Int. J. Cancer 97: 323-329.
4. Wang, C., Chao, J. and Chao, L. 2003. Adenovirus-mediated human Prostasin gene delivery is linked to increased aldosterone production and hypertension in rats. Am. J. Physiol. Regul. Integr. Comp. Physiol. 284: 1031-1036.
5. Iwashita, K., Kitamura, K., Narikiyo, T., Adachi, M., Shiraishi, N., Miyoshi, T., Nagano, J., Tuyen, D.G., Nonoguchi, H. and Tomita, K. 2003. Inhibition of Prostasin secretion by serine protease inhibitors in the kidney. J. Am. Soc. Nephrol. 14: 11-16.

CHROMOSOMAL LOCATION

Genetic locus: PRSS8 (human) mapping to 16p11.2.

SOURCE

Prostasin (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Prostasin 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-27591 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.

APPLICATIONS

Prostasin (K-15) is recommended for detection of precursor and mature heavy chain Prostasin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Prostasin siRNA (h): sc-63314, Prostasin shRNA Plasmid (h): sc-63314-SH and Prostasin shRNA (h) Lentiviral Particles: sc-63314-V.

Molecular Weight of Prostasin: 40 kDa.

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) 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.

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.