## SANTA CRUZ BIOTECHNOLOGY, INC.

# Aldosterone (10/42133): sc-57023



## BACKGROUND

Aldosterone is a steroid hormone that is the sole member of the mineralocorticoid family. It is produced from cholesterol by Aldosterone synthase in the zona glomerulosa of the adrenal cortex in the adrenal gland and functions to regulate sodium and potassium balance in the blood as well as to mediate extracellular fluid volume. Aldosterone specifically acts in the distal tubule of the kidney to stimulate ATP hydrolysis, reabsorb sodium ions and water into the blood and excrete potassium ions into the urine. Aldosterone also functions in the kidney collecting duct by stimulating H<sup>+</sup> secretion to regulate plasma bicarbonate levels. In addition to these functions, Aldosterone also exerts nonepithelial activity specifically relating to initiation of inflammatory processes, collagen formation, fibrosis and necrosis. Increased levels of plasma angiotensin II, ACTH or potassium stimulate the production of Aldosterone, which is then secreted in a diurnal rhythm.

#### REFERENCES

- Fabre, J., Muller, A.F., Gautier, A. and Perrier, C. 1959. Aldosterone function in the nephrotic syndrome and the use of corticosterolds in the treatment of this disease. Brux. Med. 38: 1457-1483.
- Bricaire, H., Leprat, J. and Luton, J.P. 1969. Present state of the dynamic studies of the adrenal cortex (excepting and Aldosterone function). Presse Med. 76: 2157-2160.
- Ludens, J.H. and Fanestil, D.D. 1976. The mechanism of Aldosterone function. Pharmacol. Ther., B. 2: 371-412.
- Edelman, I., Bogoroch, R. and Porter, G.A. 1999. On the mechanism of action of Aldosterone on sodium transport: the role of protein synthesis. 1963. J. Am. Soc. Nephrol. 10: 675-681.
- 5. Vallotton, M.B. 1999. The ups and downs of the Renin-Angiotensin-Aldosterone system since Tigerstedt's first discovery of Renin. Endocr. Res. 24: 781-788.
- McFarlane, S.I. and Sowers, J.R. 2003. Cardiovascular endocrinology 1: Aldosterone function in diabetes mellitus: effects on cardiovascular and renal disease. J. Clin. Endocrinol. Metab. 88: 516-523.
- Williams, J.S. and Williams, G.H. 2003. 50th anniversary of Aldosterone. J. Clin. Endocrinol. Metab. 88: 2364-2372.
- Fuller, P.J. 2004. Aldosterone and DNA: the 50th anniversary. Trends Endocrinol. Metab. 15: 143-146.
- BDSalt wasting syndrome caused by congenital, insufficient synthesis or Aldosterone function etiology, diagnosis and management.Endokrynol. Diabetol. Chor. Przemiany Materii Wieku Rozw 08

## SOURCE

Aldosterone (10/42133) is a mouse monoclonal antibody raised against Aldosterone conjugated to BSA.

#### PRODUCT

Each vial contains 100  $\mu g~lgG_1$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

Aldosterone (10/42133) is recommended for detection of Aldosterone by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## **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.