SANTA CRUZ BIOTECHNOLOGY, INC.

Renalase (N-15): sc-79590

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Renalase is a 342 amino acid FAD-dependent amine oxidase that is highly expressed in kidney and is expressed at a lower level in heart, skeletal muscle and small intestine. Renalase is secreted in the blood by the kidney and it is thought to regulate cardiac function and systemic blood pressure. It is also suggested that Renalase functions as a hormone that metabolizes circulating catecholamines, which have an active role in the sympathetic and parasympathetic nervous systems. Individuals with chronic kidney disease and end-stage renal disease have markedly reduced levels of plasma Renalase than healthy individuals. Infusion of Renalase in animal models causes decrease in heart rate, cardiac contractility and blood pressure. Two isoforms of Renalase exist due to alternative splicing events.

REFERENCES

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2. Xu, J., et al. 2005. Renalase is a novel, soluble monoamine oxidase that regulates cardiac function and blood pressure. J. Clin. Invest. 115: 1275-1280.
3. Go, A.S., et al. 2006. Epidemiology of non-dialysis-requiring chronic kidney disease and cardiovascular disease. Curr. Opin. Nephrol. Hypertens. 15: 296-302.
4. Xu, J., et al. 2007. Renalase, a new renal hormone: its role in health and disease. Curr. Opin. Nephrol. Hypertens. 16: 373-378.
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6. Zhao, Q., et al. 2007. Renalase gene is a novel susceptibility gene for essential hypertension: a two-stage association study in northern Han Chinese population. J. Mol. Med. 85: 877-885.
7. Li, G., et al. 2008. Catecholamines regulate the activity, secretion, and synthesis of renalase. Circulation 117: 1277-1282.
8. Desir, G.V. 2008. Renalase deficiency in chronic kidney disease, and its contribution to hypertension and cardiovascular disease. Curr. Opin. Nephrol. Hypertens. 17: 181-185.
9. Wang, J., et al. 2008. Identification, expression and tissue distribution of a renalase homologue from mouse. Mol. Biol. Rep. 35: 613-620.

CHROMOSOMAL LOCATION

Genetic locus: RNLS (human) mapping to 10q23.31.

SOURCE

Renalase (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Renalase of human origin.

STORAGE

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

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-79590 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Renalase (N-15) is recommended for detection of Renalase of human and rat 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).

Renalase (N-15) is also recommended for detection of Renalase in additional species, including bovine and porcine.

Suitable for use as control antibody for Renalase siRNA (h): sc-76384, Renalase shRNA Plasmid (h): sc-76384-SH and Renalase shRNA (h) Lentiviral Particles: sc-76384-V.

Molecular Weight of Renalase: 38 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.