SANTA CRUZ BIOTECHNOLOGY, INC.

SDHC (K-20): sc-49490

BACKGROUND

The inner mitochondrial membrane protein succinate dehydrogenase, also designated mitochondrial complex II, catalyzes the reaction of succinate and ubiquinone (coenzyme Q) to fumarate and ubiquinol in the tricarboxylic acid cycle. Succinate dehydrogenase comprises a 70 kDa flavoprotein (SDHA), a 27 kDa iron protein (SDHB), and two integral membrane proteins: a large cytochrome b protein (SDHC) and a small protein (SDHD). SDHC and SDHD anchor other subunits of the complex. In addition to its role in the mitochondrial electron transport chain, SDHC may also mediate low potential couples in an electron flow through cardiac complex II. Defects in SDHC cause pheochromocytomas and paragangliomas, tumors of the autonomous nervous system which occur mainly in the adrenal medulla, but also in the extra-adrenal paraganglias of the thorax, abdomen, neck and skull basis.

REFERENCES

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3. Gimm, O., et al. 2005. Pheochromocytoma-associated syndromes: genes, proteins and functions of RET, VHL and SDHx. Fam. Cancer 4: 17-23.
4. Liapis, C.D., et al. 2005. Carotid body paraganglioma and SDHD mutation in a Greek family. Anticancer Res. 25: 2449-2452.
5. Ishii, T., et al. 2005. A mutation in the SDHC gene of complex II increases oxidative stress, resulting in apoptosis and tumorigenesis. Cancer Res. 65: 203-209.
6. Neumann, H.P., et al. 2005. New genetic causes of pheochromocytoma: current concepts and the clinical relevance. Keio. J. Med. 54: 15-21.
7. Braun, S., et al. 2005. Active succinate dehydrogenase (SDH) and lack of SDHD mutations in sporadic paragangliomas. Anticancer Res. 25: 2809-2814.

CHROMOSOMAL LOCATION

Genetic locus: SDHC (human) mapping to 1q21; Sdhc (mouse) mapping to 1 H3.

SOURCE

SDHC (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SDHC of rat 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-49490 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

SDHC (K-20) is recommended for detection of SDHC of 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).

Molecular Weight of SDHC: 12 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.