SANTA CRUZ BIOTECHNOLOGY, INC.

SDHC (FL-169): sc-67211

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In aerobic respiration reactions, succinate dehydrogenase (SDH) catalyzes the oxidation of succinate and ubiquinone to fumarate and ubiquinol. Four subunits comprise the SDH protein complex: a flavochrome subunit (SDHA), an iron-sulfur protein (SDHB) and two membrane-bound subunits (SDHC and SDHD) anchored to the inner mitochondrial membrane. Mutations to these subunits cause mitochondrial dysfunction, corresponding to several distinct disorders. Mutations in the membrane bound components may cause hereditary paraganglioma, while SDHA mutations are associated with juvenile encephalopathy as well as Leigh Syndrome, a severe neurological disorder. Inactivating mutations in SDHB correlate with inherited, but not necessarily sporadic, cases of pheochromocytoma.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602413. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Muller, U., et al. 2005. SDHC mutations in hereditary paraganglioma/pheochromocytoma. Fam. Cancer 4: 9-12.
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. Braun, S., et al. 2005. Active succinate dehydrogenase (SDH) and lack of SDHD mutations in sporadic paragangliomas. Anticancer Res. 25: 2809-2814.
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. 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.

CHROMOSOMAL LOCATION

Genetic locus: SDHC (human) mapping to 1q23.3; Sdhc (mouse) mapping to 1 H3.

SOURCE

SDHC (FL-169) is a rabbit polyclonal antibody raised against amino acids 1-169 representing full length SDHC 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.

STORAGE

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

APPLICATIONS

SDHC (FL-169) is recommended for detection of SDHC of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

SDHC (FL-169) is also recommended for detection of SDHC in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SDHC siRNA (h): sc-61510, SDHC siRNA (m): sc-61511, SDHC shRNA Plasmid (h): sc-61510-SH, SDHC shRNA Plasmid (m): sc-61511-SH, SDHC shRNA (h) Lentiviral Particles: sc-61510-V and SDHC shRNA (m) Lentiviral Particles: sc-61511-V.

Molecular Weight of SDHC: 12 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

MONOS Satisfaction Guaranteed

Try **SDHC (C-2): sc-515102** or **SDHC (34.2): sc-100595**, our highly recommended monoclonal alternatives to SDHC (FL-169).