SANTA CRUZ BIOTECHNOLOGY, INC.

SDHC (34.2): sc-100595

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. 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.
5. Liapis, C.D., et al. 2005. Carotid body paraganglioma and SDHD mutation in a Greek family. Anticancer Res. 25: 2449-2452.
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 1q23.3.

SOURCE

SDHC (34.2) is a mouse monoclonal antibody raised against recombinant SDHC of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain 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.

RESEARCH USE

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

APPLICATIONS

SDHC (34.2) is recommended for detection of SDHC of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 SDHC siRNA (h): sc-61510, SDHC shRNA Plasmid (h): sc-61510-SH and SDHC shRNA (h) Lentiviral Particles: sc-61510-V.

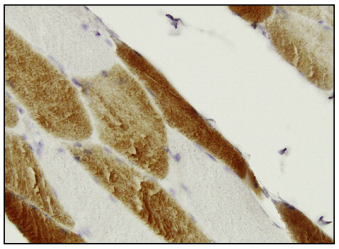
Molecular Weight of SDHC: 12 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SDHC (34.2): sc-100595. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic localization.

PROTOCOLS

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