

# SDHA (N-20): sc-27990



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

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2. Wolf, P., et al. 1975. Histochemical investigations on the presence of acetylcholinesterase and succinic dehydrogenase in fetal human spinal cord and brain stem at different stages of development. *Eur. Neurol.* 13: 31-46.
3. Brown, M.D., et al. 1976. The effects of different patterns of muscle activity on capillary density, mechanical properties and structure of slow and fast rabbit muscles. *Pflügers Arch.* 361: 241-250.
4. Shah, V.C., et al. 1976. Effect of low dose X-irradiation on the succinate dehydrogenase activity of guinea pig, rat and mouse tissues. *Strahlentherapie* 152: 83-91.
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6. Henriksson, J. and Reitman, J.S. 1977. Time course of changes in human skeletal muscle succinate dehydrogenase and cytochrome oxidase activities and maximal oxygen uptake with physical activity and inactivity. *Acta Physiol. Scand.* 99: 91-97.
7. Hirawake, H., et al. 1994. Human complex II (succinate-ubiquinone oxidoreductase): cDNA cloning of the flavoprotein (Fp) subunit of liver mitochondria. *J. Biochem.* 116: 221-227.
8. Bourgeron, T., et al. 1995. Mutation of a nuclear succinate dehydrogenase gene results in mitochondrial respiratory chain deficiency. *Nat Genet.* 11: 144-149.

## CHROMOSOMAL LOCATION

Genetic locus: SDHA (human) mapping to 5p15; Sdha (mouse) mapping to 13 C1.

## SOURCE

SDHA (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of succinate dehydrogenase flavoprotein subunit 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.

Blocking peptide available for competition studies, sc-27990 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SDHA (N-20) is recommended for detection of precursor and mature SDHA of mouse, rat and human 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).

Suitable for use as control antibody for SDHA siRNA (h): sc-61834, SDHA siRNA (m): sc-61835, SDHA shRNA Plasmid (h): sc-61834-SH, SDHA shRNA Plasmid (m): sc-61835-SH, SDHA shRNA (h) Lentiviral Particles: sc-61834-V and SDHA shRNA (m) Lentiviral Particles: sc-61835-V.

Molecular Weight of SDHA: 70 kDa.

Positive Controls: mouse brain extract: sc-2253, mouse heart extract: sc-2254 or HeLa whole cell lysate: sc-2200.

## 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **SDHA (F-2): sc-390381** or **SDHA (D-4): sc-166947**, our highly recommended monoclonal alternatives to SDHA (N-20).