

SDHA (C-8): sc-377302

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.

CHROMOSOMAL LOCATION

Genetic locus: SDHA (human) mapping to 5p15.33; Sdha (mouse) mapping to 13 C1.

SOURCE

SDHA (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 637-664 at the C-terminus of SDHA of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377302 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

SDHA (C-8) is recommended for detection of precursor and mature SDHA of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

SDHA (C-8) is also recommended for detection of precursor and mature SDHA in additional species, including porcine.

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.

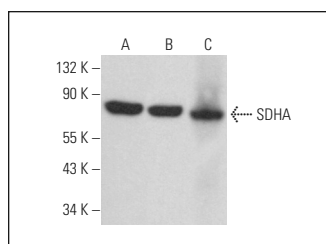
Molecular Weight of SDHA: 70 kDa.

Positive Controls: human heart extract: sc-363763, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

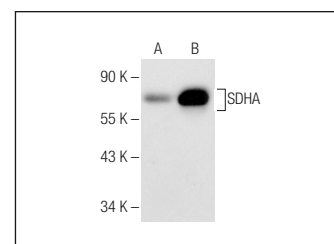
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 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



SDHA (C-8): sc-377302. Western blot analysis of SDHA expression in HeLa (A) and NIH/3T3 (B) whole cell lysates and rat adipose tissue extract (C).



SDHA (C-8): sc-377302. Western blot analysis of SDHA expression in HeLa whole cell lysate (A) and human heart tissue extract (B).

SELECT PRODUCT CITATIONS

- Ballarò, R., et al. 2019. Moderate exercise in mice improves cancer plus chemotherapy-induced muscle wasting and mitochondrial alterations. *FASEB J.* 33: 5482-5494.
- Belli, R., et al. 2019. Metabolic reprogramming promotes myogenesis during aging. *Front. Physiol.* 10: 897.
- Agosti, E., et al. 2020. Both ghrelin deletion and unacylated ghrelin overexpression preserve muscles in aging mice. *Aging* 12: 13939-13957.
- Ballarò, R., et al. 2021. Targeting mitochondria by SS-31 ameliorates the whole body energy status in cancer- and chemotherapy-induced cachexia. *Cancers* 13: 850.
- Beltrà, M., et al. 2022. PGC-1α in the myofibers regulates the balance between myogenic and adipogenic progenitors affecting muscle regeneration. *iScience* 25: 105480.

RESEARCH USE

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

PROTOCOLS

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