SANTA CRUZ BIOTECHNOLOGY, INC.

SDHB (L-16): sc-34150

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 associate 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. 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.
2. Bourgeron, T., et al. 1995. Mutation of a nuclear succinate dehydrogenase gene results in mitochondrial respiratory chain deficiency. Nat. Genet. 11: 144-149.
3. Astuti, D., et al. 2002. Gene mutations in the succinate dehydrogenase subunit SDHB cause susceptibility to familial pheochromocytoma and to familial paraganglioma. Am. J. Hum. Genet. 69: 49-54.
4. Benn, D.E., et al. 2003. Novel succinate dehydrogenase subunit B (SDHB) mutations in familial phaeochromocytomas and paragangliomas, but an absence of somatic SDHB mutations in sporadic phaeochromocytomas. Oncogene 22: 1358-1364.
5. Allibhai, Z., et al. 2004. Malignant pheochromocytoma associated with germline mutation of the SDHB gene. J. Urol. 172: 1409-1410.
6. Morris, M.R., et al. 2004. Molecular genetic analysis of FIH-1, FH, and SDHB candidate tumour suppressor genes in renal cell carcinoma. J. Clin. Pathol. 57: 706-711.

CHROMOSOMAL LOCATION

Genetic locus: SDHB (human) mapping to 1p36.13; Sdhb (mouse) mapping to 4 D3.

SOURCE

SDHB (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of succinate dehydrogenase iron-sulfur protein 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-34150 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SDHB (L-16) is recommended for detection of SDHB of mouse, rat and human 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).

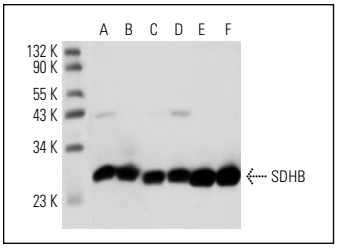
SDHB (L-16) is also recommended for detection of SDHB in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SDHB siRNA (h): sc-44088, SDHB siRNA (m): sc-44407, SDHB shRNA Plasmid (h): sc-44088-SH, SDHB shRNA Plasmid (m): sc-44407-SH, SDHB shRNA (h) Lentiviral Particles: sc-44088-V and SDHB shRNA (m) Lentiviral Particles: sc-44407-V.

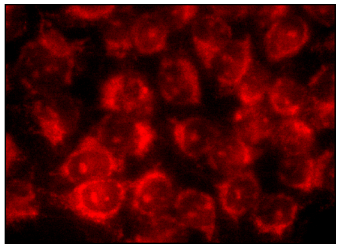
Molecular Weight of SDHB: 32 kDa.

Positive Controls: mouse liver extract: sc-2256, Hep G2 cell lysate: sc-2227 or MDCK cell lysate: sc-2252.

DATA



SDHB (L-16): sc-34150. Western blot analysis of SDHB expression in Hep G2 (**A**), MDCK (**B**), c4 (**C**) and U-698-M (**D**) whole cell lysates and rat (**E**) and mouse (**D**) liver tissue extracts.



SDHB (L-16): sc-34150. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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 or our catalog for detailed protocols and support products.