

cytochrome b (S-20): sc-31998

BACKGROUND

Cytochrome b is a component of the ubiquinol-cytochrome c reductase complex, which is a respiratory chain that generates an electrochemical potential, coupled to ATP synthesis. The principal components of the b-c1 complex are cytochrome b, cytochrome c1, and the rieske protein. Cytochrome b possesses two heme groups, which are not covalently attached to the protein. Mutations in cytochrome b are associated with Leber's hereditary optic neuropathy and with myopathy.

REFERENCES

1. Anderson, S., et al. 1981. Sequence and organization of the human mitochondrial genome. *Nature* 290: 457-465.
2. Abe, K., et al. 1985. Amino acid sequences of cytochrome b5 from human, porcine, and bovine erythrocytes and comparison with liver microsomal cytochrome b5. *J. Biochem.* 97: 1659-1668.
3. Yoo, M. et al. 1988. The complete nucleotide sequence of human liver cytochrome b5 mRNA. *Biochem. Biophys. Res. Commun.* 156: 576-580.
4. Giordano, S.J. et al. 1991. The human liver and reticulocyte cytochrome b5 mRNAs are products from a single gene. *Biochem. Biophys. Res. Commun.* 178: 38-44.
5. Brown, M.D., et al. 1992. Mitochondrial DNA complex I and III mutations associated with Leber's hereditary optic neuropathy. *Genetics* 130: 163-173.
6. Andreu, A.L., et al. 1998. Missense mutation in the mtDNA cytochrome b gene in a patient with myopathy. *Neurology* 51: 1444-1447.

CHROMOSOMAL LOCATION

Genetic locus: CYTB (human) mapping to MT; CYTB (mouse) mapping to MT.

SOURCE

cytochrome b (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of cytochrome b 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-31998 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

cytochrome b (S-20) is recommended for detection of cytochrome b 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).

cytochrome b (S-20) is also recommended for detection of cytochrome b in additional species, including equine, canine, bovine and porcine.

Molecular Weight of cytochrome b: 43 kDa.

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.

RESEARCH USE

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