SANTA CRUZ BIOTECHNOLOGY, INC.

cytochrome b (H-300): sc-11436

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 posesses 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. Andreu, A.L., et al. 1998. Missense mutation in the mtDNA cytochrome b gene in a patient with myopathy. Neurology 51: 1444-1447.
3. Biswas, S.K., et al. 2001. Identification of Candida dubliniensis based on the specific amplification of mitochondrial cytochrome b gene. 42: 95-98.
4. Islas-Osuna, M.A., et al. 2002. Cbp1 is required for translation of the mitochondrial cytochrome b mRNA of *Saccharomyces cerevisiae*. J. Biol. Chem. 277: 37987-37990.
5. Mascheretti, S., et al. 2003. How did pygmy shrews colonize Ireland? Clues from a phylogenetic analysis of mitochondrial cytochrome b sequences. Proc. Biol. Sci. 270: 1593-1599.
6. Verma, S.K., et al. 2004. Phylogenetic position of *Platanista gangetica:* insights from the mitochondrial cytochrome b and nuclear interphotoreceptor retinoid-binding protein gene sequences. Mol. Phylogenet. Evol. 33: 280-288.
7. Meece, J.K., et al. 2005. Identification of mosquito bloodmeal source by terminal restriction fragment length polymorphism profile analysis of the cytochrome B gene. J. Med. Entomol. 42: 657-667.

CHROMOSOMAL LOCATION

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

SOURCE

cytochrome b (H-300) is a rabbit polyclonal antibody raised against amino acids 18-300 mapping at the N-terminus 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.

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 (H-300) 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), 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).

cytochrome b (H-300) is also recommended for detection of cytochrome b in additional species, including canine.

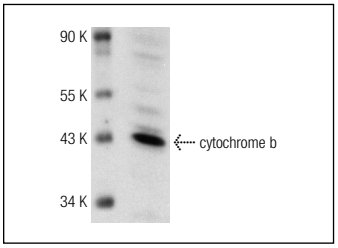
Molecular Weight of cytochrome b: 43 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

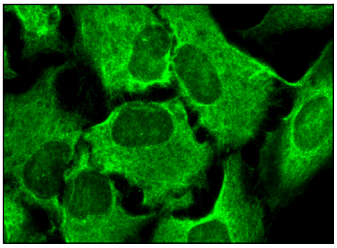
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



cytochrome b (H-300): sc-11436. Western blot analysis of cytochrome b expression in Hep G2 whole cell lysate.



cytochrome b (H-300): sc-11436. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Mahyar-Roemer, M., et al. 2002. Role of Bax in resveratrol-induced apoptosis of colorectal carcinoma cells. BMC Cancer 2: 27.
2. Wan, X., et al. 2012. Defects of mtDNA replication impaired mitochondrial biogenesis during *Trypanosoma cruzi* infection in human cardiomyocytes and chagasic patients: the role of Nrf1/2 and antioxidant response. J. Am. Heart Assoc. 1: e003855.

RESEARCH USE

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