

# cytochrome b5 (H-114): sc-33174

## BACKGROUND

Cytochrome b5 is a membrane-bound member of the cytochrome b family. A heme protein that functions as an electron carrier for many membrane-bound oxygenases, cytochrome b5 possesses two heme groups, which are not covalently attached to the protein. Two isoforms of cytochrome b5, a microsomal membrane-bound form and a cytoplasmic form, are produced by alternative splicing. Mutations in cytochrome b5 are associated with Leber's hereditary optic neuropathy and with myopathy.

## REFERENCES

1. 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.
2. Yoo, M., et al. 1988. The complete nucleotide sequence of human liver cytochrome b5 mRNA. *Biochem. Biophys. Res. Commun.* 156: 576-580.
3. 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.

## CHROMOSOMAL LOCATION

Genetic locus: CYB5 (human) mapping to 18q22.3; Cyb5 (mouse) mapping to 18 E4.

## SOURCE

cytochrome b5 (H-114) is a rabbit polyclonal antibody raised against amino acids 21-134 mapping at the C-terminus of cytochrome b5 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.

## APPLICATIONS

cytochrome b5 (H-114) is recommended for detection of cytochrome b5 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), immunohistochemistry (including paraffin-embedded sections) (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 b5 (H-114) is also recommended for detection of cytochrome b5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for cytochrome b5 siRNA (h): sc-37377, cytochrome b5 siRNA (m): sc-37378, cytochrome b5 shRNA Plasmid (h): sc-37377-SH, cytochrome b5 shRNA Plasmid (m): sc-37378-SH, cytochrome b5 shRNA (h) Lentiviral Particles: sc-37377-V and cytochrome b5 shRNA (m) Lentiviral Particles: sc-37378-V.

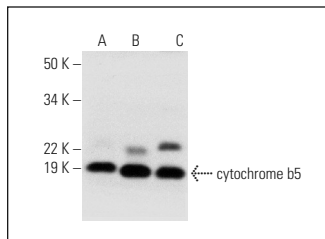
Molecular Weight of cytochrome b5: 15 kDa.

Positive Controls: human liver extract: sc-363766, rat liver extract: sc-2395 or mouse liver extract: sc-2256.

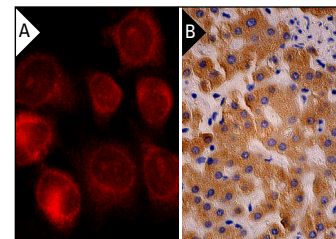
## STORAGE

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

## DATA



cytochrome b5 (H-114): sc-33174. Western blot analysis of cytochrome b5 expression in human liver (A), rat liver (B) and mouse liver (C) tissue extracts.



cytochrome b5 (H-114): sc-33174. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (B).

## SELECT PRODUCT CITATIONS

1. Wagner, S., et al. 2008. Cytochrome b5 expression in gonadectomy-induced adrenocortical neoplasms of the domestic ferret (*Mustela putorius furo*). *Vet. Pathol.* 45: 439-442.
2. Zhang, Y., et al. 2010. The flavoheme reductase Ncb5or protects cells against endoplasmic reticulum stress-induced lipotoxicity. *J. Lipid Res.* 51: 53-62.
3. Chauvigné, F., et al. 2011. Mono-(2-ethylhexyl) phthalate directly alters the expression of Leydig cell genes and CYP17 lyase activity in cultured rat fetal testis. *PLoS ONE* 6: e27172.
4. Neve, E.P., et al. 2012. Amidoxime reductase system containing cytochrome b5 type B (CYB5B) and MOSC2 is of importance for lipid synthesis in adipocyte mitochondria. *J. Biol. Chem.* 287: 6307-6317.

## 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.

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Try **cytochrome b5 (36): sc-130311**, our highly recommended monoclonal alternative to cytochrome b5 (H-114).