

# CYB5D2 (T-12): sc-136639

## BACKGROUND

Cytochrome b5 is a membrane-bound heme protein that possesses two heme groups and functions as an electron carrier for many membrane-bound oxygenases. Two isoforms of cytochrome b5, a microsomal membrane-bound form and a cytoplasmic form, are produced by alternative splicing. Mutations in the gene encoding cytochrome b5 are associated with Leber's hereditary optic neuropathy and myopathy. CYB5D2 (cytochrome b5 domain containing 2) is a 264 amino acid single-pass membrane protein that contains one cytochrome b5 heme-binding domain, suggesting a similar function to cytochrome b5. The gene encoding CYB5D2 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

## REFERENCES

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4. Hom, K., Ma, Q.F., Wolfe, G., Zhang, H., Storch, E.M., Daggett, V., Basus, V.J. and Waskell, L. 2000. NMR studies of the association of cytochrome b5 with cytochrome c. *Biochemistry* 39: 14025-14039.
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6. Mapes, S., Tarantal, A.F., Parker, C.R., Moran, F.M., Bahr, J.M., Pyter, L. and Conley, A.J. 2002. Adrenocortical cytochrome b5 expression during fetal development of the rhesus macaque. *Endocrinology* 143: 1451-1458.

## CHROMOSOMAL LOCATION

Genetic locus: CYB5D2 (human) mapping to 17p13.2; Cyb5d2 (mouse) mapping to 11 B4.

## SOURCE

CYB5D2 (T-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of CYB5D2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136639 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

CYB5D2 (T-12) is recommended for detection of CYB5D2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with CYB5D1.

Suitable for use as control antibody for CYB5D2 siRNA (h): sc-93765, CYB5D2 siRNA (m): sc-142651, CYB5D2 shRNA Plasmid (h): sc-93765-SH, CYB5D2 shRNA Plasmid (m): sc-142651-SH, CYB5D2 shRNA (h) Lentiviral Particles: sc-93765-V and CYB5D2 shRNA (m) Lentiviral Particles: sc-142651-V.

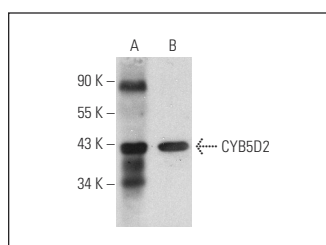
Molecular Weight of CYB5D2: 29 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226 or mouse testis extract: sc-2405.

## 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



CYB5D2 (T-12): sc-136639. Western blot analysis of CYB5D2 expression in mouse testis tissue extract (A) and COLO 320DM whole cell lysate (B).

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.