

cytochrome b5 type B (C-4): sc-390825

BACKGROUND

Cytochrome b5 type B (cytochrome b5 type B (outer mitochondrial membrane)), also known as OMB5 or CYB5-M, is a 146 amino acid membrane bound hemoprotein that acts as an electron carrier for several membrane bound oxygenases. A member of the cytochrome b5 family, cytochrome b5 type B contains one cytochrome b5 heme-binding domain and is encoded by a gene that maps to human chromosome 16q22.1. Chromosome 16 encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. *Clin. Genet.* 23: 318-320.
2. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. *Am. J. Hum. Genet.* 52: 249-254.
3. Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/Kelch repeat family, is mutated in giant axonal neuropathy. *Nat. Genet.* 26: 370-374.
4. Soucy, P. and Luu-The, V. 2002. Assessment of the ability of type 2 cytochrome b5 to modulate 17,20-lyase activity of human P450c17. *J. Steroid Biochem. Mol. Biol.* 80: 71-75.
5. Kühlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. *Neurology* 58: 1273-1276.
6. Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. *Curr. Gastroenterol. Rep.* 6: 467-473.
7. Mathew, C.G. and Lewis, C.M. 2004. Genetics of inflammatory bowel disease: progress and prospects. *Hum. Mol. Genet.* 13: R161-R168.

CHROMOSOMAL LOCATION

Genetic locus: CYB5B (human) mapping to 16q22.1; Cyb5b (mouse) mapping to 8 D3.

SOURCE

cytochrome b5 type B (C-4) is a mouse monoclonal antibody raised against amino acids 86-130 mapping near the C-terminus of cytochrome b5 type B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain 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.

APPLICATIONS

cytochrome b5 type B (C-4) is recommended for detection of cytochrome b5 type B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for cytochrome b5 type B siRNA (h): sc-105265, cytochrome b5 type B siRNA (m): sc-142759, cytochrome b5 type B shRNA Plasmid (h): sc-105265-SH, cytochrome b5 type B shRNA Plasmid (m): sc-142759-SH, cytochrome b5 type B shRNA (h) Lentiviral Particles: sc-105265-V and cytochrome b5 type B shRNA (m) Lentiviral Particles: sc-142759-V.

Molecular Weight (predicted) of cytochrome b5 type B: 16 kDa.

Molecular Weight (observed) of cytochrome b5 type B: 23 kDa.

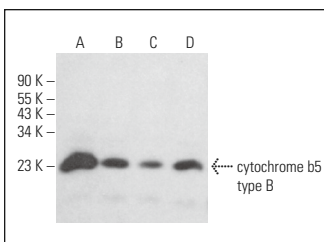
Positive Controls: HeLa whole cell lysate: sc-2200, human liver extract: sc-363766 or mouse liver extract: sc-2256.

RECOMMENDED SUPPORT REAGENTS

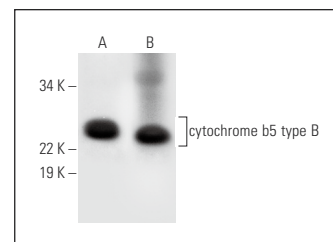
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



cytochrome b5 type B (C-4): sc-390825. Western blot analysis of cytochrome b5 type B expression in HeLa (A), Hep G2 (B), JAR (C) and NIH/3T3 (D) whole cell lysates.



cytochrome b5 type B (C-4): sc-390825. Western blot analysis of cytochrome b5 type B expression in human liver (A) and mouse liver (B) tissue extracts.

RESEARCH USE

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

PROTOCOLS

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