SANTA CRUZ BIOTECHNOLOGY, INC.

cytochrome b5 type B (F-5): sc-390876

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Kuhlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. Neurology 58: 1273-1276.

CHROMOSOMAL LOCATION

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

SOURCE

cytochrome b5 type B (F-5) 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_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cytochrome b5 type B (F-5) is available conjugated to agarose (sc-390876 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390876 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390876 PE), fluorescein (sc-390876 FITC), Alexa Fluor® 488 (sc-390876 AF488), Alexa Fluor® 546 (sc-390876 AF546), Alexa Fluor® 594 (sc-390876 AF594) or Alexa Fluor® 647 (sc-390876 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390876 AF680) or Alexa Fluor® 790 (sc-390876 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

cytochrome b5 type B (F-5) 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), 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).

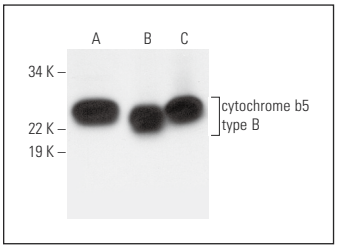
Suitable for use as control antibody for cytochrome b5 type B siRNA (h): sc-105265, cytochrome b5 type B siRNA (m): sc-142759, cytochrome b5 type B shRNA Plasmid (h): sc-105265-SH, cytochrome b5 type B shRNA Plasmid (m): sc-142759-SH, cytochrome b5 type B shRNA (h) Lentiviral Particles: sc-105265-V and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

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

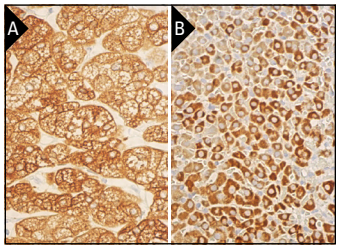
Molecular Weight (observed) of cytochrome b5 type B: 23 kDa.

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

DATA



cytochrome b5 type B (F-5): sc-390876. Western blot analysis of cytochrome b5 type B expression in human liver (**A**), rat liver (**B**) and mouse liver (**C**) tissue extracts.



cytochrome b5 type B (F-5): sc-390876. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and membrane staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse adrenal gland tissue showing cytoplasmic staining of glandular cells (**B**). Detected with m-IgG_1 BP-HRP: sc-525408.

SELECT PRODUCT CITATIONS

1. Mourtzi, N., et al. 2021. lncRNA NORAD is consistently detected in breastmilk exosomes and its expression is downregulated in mothers of preterm infants. Int. J. Mol. Med. 48: 216.

STORAGE

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

RESEARCH USE

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