SANTA CRUZ BIOTECHNOLOGY, INC.

Peroxin 3 (B-6): sc-515149

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Peroxisomes are single-membrane bound organelles present in virtually all eukaryotic cells. They are involved in numerous catabolic and anabolic pathways, including β-oxidation of very long chain fatty acids, metabolism of hydrogen peroxide, plasmalogen biosynthesis and bile acid synthesis. The Peroxin family, which includes more than 20 members, is required for peroxisome biogenesis. Peroxin 3, also known as PEX3 (peroxisomal biogenesis factor 3) or TRG18, is a 373 amino acid multi-pass membrane protein that localizes to peroxisomes and belongs to the Peroxin family. Expressed ubiquitously, Peroxin 3 interacts with Peroxin 19 and is involved in peroxisome biosynthesis and membrane vesicle assembly, as well as in the maintenance of peroxisomal integrity. Additionally, Peroxin 3 acts as a docking factor for Peroxin 19 and is required for the import of peroxisomal proteins. Defects in the gene encoding Peroxin 3 are the cause of peroxisome biogenesis disorder complementation group 12 (PBD-CG12) and Zellweger syndrome (ZwS), both of which arise from a failure of peroxisomal protein import.

REFERENCES

1. Kammerer, S., et al. 1998. Cloning and characterization of the gene encoding the human peroxisomal assembly protein PEX3p. FEBS Lett. 429: 53-60.
2. Muntau, A.C., et al. 2000. Defective peroxisome membrane synthesis due to mutations in human PEX3 causes Zellweger syndrome, complementation group G. Am. J. Hum. Genet. 67: 967-975.
3. Ghaedi, K., et al. 2000. PEX3 is the causal gene responsible for peroxisome membrane assembly-defective Zellweger syndrome of complementation group G. Am. J. Hum. Genet. 67: 976-981.
4. Muntau, A.C., et al. 2000. The human PEX3 gene encoding a peroxisomal assembly protein: genomic organization, positional mapping, and mutation analysis in candidate phenotypes. Biochem. Biophys. Res. Commun. 268: 704-710.

CHROMOSOMAL LOCATION

Genetic locus: PEX3 (human) mapping to 6q24.2.

SOURCE

Peroxin 3 (B-6) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Peroxin 3 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.

Peroxin 3 (B-6) is available conjugated to agarose (sc-515149 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515149 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515149 PE), fluorescein (sc-515149 FITC), Alexa Fluor® 488 (sc-515149 AF488), Alexa Fluor® 546 (sc-515149 AF546), Alexa Fluor® 594 (sc-515149 AF594) or Alexa Fluor® 647 (sc-515149 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515149 AF680) or Alexa Fluor® 790 (sc-515149 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Peroxin 3 (B-6) is recommended for detection of Peroxin 3 of 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 Peroxin 3 siRNA (h): sc-95091, Peroxin 3 shRNA Plasmid (h): sc-95091-SH and Peroxin 3 shRNA (h) Lentiviral Particles: sc-95091-V.

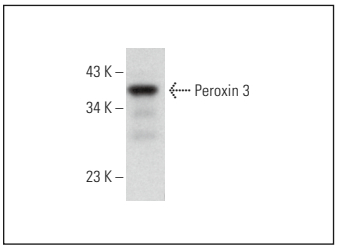
Molecular Weight of Peroxin 3: 42 kDa.

Positive Controls: human skeletal muscle extract: sc-363776.

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



Peroxin 3 (B-6): sc-515149. Western blot analysis of Peroxin 3 expression in human skeletal muscle tissue extract.

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.

PROTOCOLS

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