

Peroxin 3 (F-23): sc-133903

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

- Kammerer, S., et al. 1998. Cloning and characterization of the gene encoding the human peroxisomal assembly protein PEX3p. *FEBS Lett.* 429: 53-60.
- 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.
- 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.
- 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.
- Mayerhofer, P.U., et al. 2002. Two splice variants of human PEX19 exhibit distinct functions in peroxisomal assembly. *Biochem. Biophys. Res. Commun.* 291: 1180-1186.
- Muntau, A.C., et al. 2003. Interaction of PEX3 and PEX19 visualized by fluorescence resonance energy transfer (FRET). *Adv. Exp. Med. Biol.* 544: 221-224.
- Muntau, A.C., et al. 2003. The interaction between human PEX3 and PEX19 characterized by fluorescence resonance energy transfer (FRET) analysis. *Eur. J. Cell Biol.* 82: 333-342.
- Fang, Y., et al. 2004. PEX3 functions as a PEX19 docking factor in the import of class I peroxisomal membrane proteins. *J. Cell Biol.* 164: 863-875.

CHROMOSOMAL LOCATION

Genetic locus: PEX3 (human) mapping to 6q24.2; Pex3 (mouse) mapping to 10 A2.

SOURCE

Peroxin 3 (F-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic Peroxin 3 peptide of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

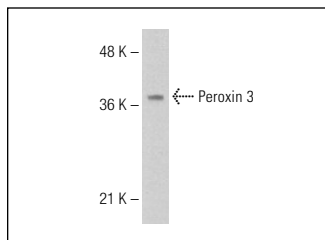
Peroxin 3 (F-23) is recommended for detection of Peroxin 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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 Peroxin 3 siRNA (h): sc-95091, Peroxin 3 siRNA (m): sc-152174, Peroxin 3 shRNA Plasmid (h): sc-95091-SH, Peroxin 3 shRNA Plasmid (m): sc-152174-SH, Peroxin 3 shRNA (h) Lentiviral Particles: sc-95091-V and Peroxin 3 shRNA (m) Lentiviral Particles: sc-152174-V.

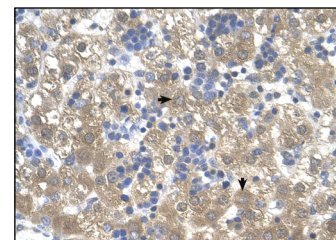
Molecular Weight of Peroxin 3: 42 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or human liver tissue.

DATA



Peroxin 3 (F-23): sc-133903. Western blot analysis of Peroxin 3 expression in Hep G2 whole cell lysate.



Peroxin 3 (F-23): sc-133903. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing cytoplasmic localization.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfation
Guaranteed

Try **Peroxin 3 (B-6): sc-515149**, our highly recommended monoclonal alternative to Peroxin 3 (F-23).