

Peroxin 1 (D-9): sc-393174

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 gene family, which includes more than 20 members, is required for peroxisome biogenesis. Peroxin 1 is required for stability of Pex5 and protein import into the peroxisome matrix. Peroxin 1 is anchored by Pex26 to peroxisome membranes, to form heteromeric AAA ATPase complexes required for the import of proteins into peroxisomes.

REFERENCES

- Gartner, J. 2000. Organelle disease: peroxisomal disorders. *Eur. J. Pediatr.* 159: S236-S239.
- Collins, C.S., et al. 2000. The peroxisome biogenesis factors pex4p, pex22p, pex1p, and pex6p act in the terminal steps of peroxisomal matrix protein import. *Mol. Cell. Biol.* 20: 7516-7526.
- Fujiki, Y. 2000. Peroxisome biogenesis and peroxisome biogenesis disorders. *FEBS Lett.* 476: 42-46.
- Brosius, U. and Gartner, J. 2002. Cellular and molecular aspects of Zellweger syndrome and other peroxisome biogenesis disorders. *Cell. Mol. Life Sci.* 59: 1058-1069.
- Honsho, M., et al. 2002. The membrane biogenesis peroxin Pex16p. Topogenesis and functional roles in peroxisomal membrane assembly. *J. Biol. Chem.* 277: 44513-44524.
- Matsumoto, N., et al. 2003. The pathogenic peroxin Pex26p recruits the Pex1p-Pex6p AAA ATPase complexes to peroxisomes. *Nat. Cell Biol.* 5: 454-460.

CHROMOSOMAL LOCATION

Genetic locus: PEX1 (human) mapping to 7q21.2.

SOURCE

Peroxin 1 (D-9) is a mouse monoclonal antibody raised against amino acids 601-798 mapping within an internal region of Peroxin 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Peroxin 1 (D-9) is available conjugated to agarose (sc-393174 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393174 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393174 PE), fluorescein (sc-393174 FITC), Alexa Fluor® 488 (sc-393174 AF488), Alexa Fluor® 546 (sc-393174 AF546), Alexa Fluor® 594 (sc-393174 AF594) or Alexa Fluor® 647 (sc-393174 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393174 AF680) or Alexa Fluor® 790 (sc-393174 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Peroxin 1 (D-9) is recommended for detection of Peroxin 1 of human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Peroxin 1 siRNA (h): sc-44927, Peroxin 1 shRNA Plasmid (h): sc-44927-SH and Peroxin 1 shRNA (h) Lentiviral Particles: sc-44927-V.

Molecular Weight of Peroxin 1: 143 kDa.

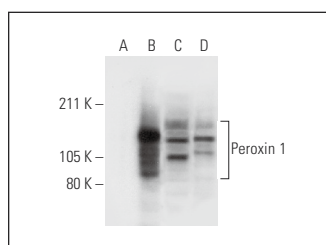
Positive Controls: Peroxin 1 (h): 293T Lysate: sc-115238, Jurkat whole cell lysate: sc-2204 or human liver extract: sc-363766.

RECOMMENDED SUPPORT REAGENTS

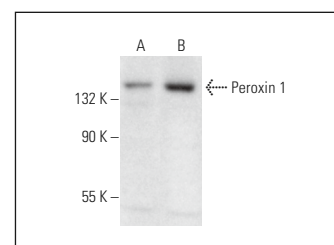
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 1 (D-9): sc-393174. Western blot analysis of Peroxin 1 expression in non-transfected 293T: sc-117752 (A), human Peroxin 1 transfected 293T: sc-115238 (B) and Jurkat (C) whole cell lysates and human liver tissue extract (D).



Peroxin 1 (D-9): sc-393174. Western blot analysis of Peroxin 1 expression in Jurkat (A) and MCF7 (B) whole cell lysates.

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.