

Peroxin 11 γ (D-12): sc-131049

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. The Peroxin 11 peroxisomal membrane proteins are the only factors known to promote peroxisome division in multiple species. Peroxin 11 proteins have a direct role in peroxisomal fatty acid oxidation and only affect peroxisome abundance indirectly. Peroxin 11 γ (peroxisomal biogenesis factor 11 gamma), also known as PEX11G or Peroxin-11C, is a 241 amino acid multi-pass membrane protein that belongs to the Peroxin 11 family. Peroxin 11 γ exist as two isoforms due to alternative splicing events.

REFERENCES

- Li, X. and Gould, S.J. 2002. PEX11 promotes peroxisome division independently of peroxisome metabolism. *J. Cell Biol.* 156: 643-651.
- Li, X., Baumgart, E., Dong, G.X., Morrell, J.C., Jimenez-Sanchez, G., Valle, D., Smith, K.D. and Gould, S.J. 2002. PEX11 α is required for peroxisome proliferation in response to 4-phenylbutyrate but is dispensable for peroxisome proliferator-activated receptor α -mediated peroxisome proliferation. *Mol. Cell. Biol.* 22: 8226-8240.
- Tanaka, A., Okumoto, K. and Fujiki, Y. 2003. cDNA cloning and characterization of the third isoform of human peroxin PEX11p. *Biochem. Biophys. Res. Commun.* 300: 819-823.
- Li, X. and Gould, S.J. 2003. The Dynamin-like GTPase DLP1 is essential for peroxisome division and is recruited to peroxisomes in part by PEX11. *J. Biol. Chem.* 278: 17012-17020.
- Thoms, S. and Erdmann, R. 2005. Dynamin-related proteins and PEX11 proteins in peroxisome division and proliferation. *FEBS J.* 272: 5169-5181.
- Schrader, M. and Fahimi, H.D. 2006. Growth and division of peroxisomes. *Int. Rev. Cytol.* 255: 237-290.
- Fagarasanu, A., Fagarasanu, M. and Rachubinski, R.A. 2007. Maintaining peroxisome populations: a story of division and inheritance. *Annu. Rev. Cell Dev. Biol.* 23: 321-344.

CHROMOSOMAL LOCATION

Genetic locus: PEX11G (human) mapping to 19p13.2; Pex11c (mouse) mapping to 8 A1.1.

STORAGE

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

PROTOCOLS

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

SOURCE

Peroxin 11 γ (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of Peroxin 11 γ of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131049 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Peroxin 11 γ (D-12) is recommended for detection of Peroxin 11 γ isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Peroxin 11 γ (D-12) is also recommended for detection of Peroxin 11 γ isoforms 1 and 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Peroxin 11 γ siRNA (h): sc-97536, Peroxin 11 γ siRNA (m): sc-152171, Peroxin 11 γ shRNA Plasmid (h): sc-97536-SH, Peroxin 11 γ shRNA Plasmid (m): sc-152171-SH, Peroxin 11 γ shRNA (h) Lentiviral Particles: sc-97536-V and Peroxin 11 γ shRNA (m) Lentiviral Particles: sc-152171-V.

Molecular Weight of Peroxin 11 γ : 27 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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