SANTA CRUZ BIOTECHNOLOGY, INC.

Peroxin 26 (D-15): sc-67742

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 gene family, which includes more than 20 members, is required for peroxisome biogenesis. Peroxin 26, also known as PEX26 (peroxisome assembly protein 26) is a widely expressed protein that functions to recruit, shuttle and anchor Peroxin 1 and Peroxin 6 to the peroxisome membrane, thus allowing the formation of heteromeric AAA ATPase complexes. Once formed, the ATPase complexes are able to import various proteins, such as catalase, into peroxisomes. Proper import of these peroxisomal proteins is essential for normal development. Defects in the gene encoding Peroxin 26 are the cause of multiple peroxisome-related disorders, including Zellweger syndrome (ZWS), infantile Refsum disease (IRD) and peroxisome biogenesis disorder complementation group 8 (PBD-CG8).

REFERENCES

1. Matsumoto, N., et al. 2003. The pathogenic Peroxin Pex26p recruits the Pex1p-Pex6p AAA ATPase complexes to peroxisomes. Nat. Cell Biol. 5: 454-460.
2. Matsumoto, N., et al. 2003. Mutations in novel Peroxin gene PEX26 that cause peroxisome-biogenesis disorders of complementation group 8 provide a genotype-phenotype correlation. Am. J. Hum. Genet. 73: 233-246.
3. Steinberg, S., et al. 2004. The PEX gene screen: molecular diagnosis of peroxisome biogenesis disorders in the Zellweger syndrome spectrum. Mol. Genet. Metab. 83: 252-263.
4. Miyata, N. and Fujiki, Y. 2005. Shuttling mechanism of peroxisome targeting signal type 1 receptor Pex5: ATP-independent import and ATP-dependent export. Mol. Cell. Biol. 25: 10822-10832.
5. Weller, S., et al. 2005. Alternative splicing suggests extended function of PEX26 in peroxisome biogenesis. Am. J. Hum. Genet. 76: 987-1007.
6. Halbach, A., et al. 2006. Targeting of the tail-anchored peroxisomal membrane proteins PEX26 and PEX15 occurs through C-terminal PEX19-binding sites. J. Cell Sci. 119: 2508-2517.
7. Furuki, S., et al. 2006. Mutations in the Peroxin Pex26p responsible for peroxisome biogenesis disorders of complementation group 8 impair its stability, peroxisomal localization, and interaction with the Pex1p x Pex6p complex. J. Biol. Chem. 281: 1317-1323.
8. Tamura, S., et al. 2006. Dynamic and functional assembly of the AAA peroxins, Pex1p and Pex6p, and their membrane receptor Pex26p. J. Biol. Chem. 281: 27693-27704.
9. Fujiki, Y., et al. 2008. Dynamic and functional assembly of the AAA peroxins, Pex1p and Pex6p, and their membrane receptor Pex26p involved in shuttling of the PTS1 receptor Pex5p in peroxisome biogenesis. Biochem. Soc. Trans. 36: 109-113.

RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: Pex26 (mouse) mapping to 6 F1.

SOURCE

Peroxin 26 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Peroxin 26 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-67742 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Peroxin 26 (D-15) is recommended for detection of Peroxisome assembly protein 26 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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 26 siRNA (m): sc-62774, Peroxin 26 shRNA Plasmid (m): sc-62774-SH and Peroxin 26 shRNA (m) Lentiviral Particles: sc-62774-V.

Molecular Weight (predicted) of Peroxin 26: 34 kDa.

Molecular Weight (observed) of Peroxin 26: 34-43 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

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.