

Pmp34 (N-15): sc-86795

BACKGROUND

Peroxisomes perform many functions within the eukaryotic cell, including metabolism of fatty acids and toxins, importing proteins into organelles and aiding in proliferation. Proliferation of peroxisomes is independent of cell division and can be chemically induced. Pmp34 (34 kDa peroxisomal membrane protein), also known as solute carrier family 25 member 17 (SLC25A17), is a 307 amino acid protein that acts as an adenine nucleotide transporter and possibly is involved in the transport of ATP across the peroxisomal membrane. The yeast homolog of Pmp34 participates in peroxisomal proliferation. Pmp34 contains at least two sets of targeting information that results in its insertion into the membrane. Pex19, a protein necessary for early peroxisomal biogenesis, interacts with Pmp34 in the cytosol, and it is suggested that Pex19 may play a key role in Pmp integration into the peroxisomal membrane.

REFERENCES

- Wylin, T., et al. 1998. Identification and characterization of human Pmp34, a protein closely related to the peroxisomal integral membrane protein Pmp47 of *Candida boidinii*. *Eur. J. Biochem.* 258: 332-338.
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- Sacksteder, K.A., et al. 2000. Pex19 binds multiple peroxisomal membrane proteins, is predominantly cytoplasmic, and is required for peroxisome membrane synthesis. *J. Cell Biol.* 148: 931-944.
- Honsho, M. and Fujiki, Y. 2001. Topogenesis of peroxisomal membrane protein requires a short, positively charged intervening-loop sequence and flanking hydrophobic segments. Study using human membrane protein Pmp34. *J. Biol. Chem.* 276: 9375-9382.
- van Roermund, C.W., et al. 2001. Identification of a peroxisomal ATP carrier required for medium-chain fatty acid β -oxidation and normal peroxisome proliferation in *Saccharomyces cerevisiae*. *Mol. Cell. Biol.* 21: 4321-4329.
- Fukao, Y., et al. 2001. Developmental analysis of a putative ATP/ADP carrier protein localized on glyoxysomal membranes during the peroxisome transition in pumpkin cotyledons. *Plant Cell Physiol.* 42: 835-841.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A17 (human) mapping to 22q13.2; Slc25a17 (mouse) mapping to 15 E1.

SOURCE

Pmp34 (N-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of Pmp34 of human 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-86795 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pmp34 (N-15) is recommended for detection of Pmp34 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pmp34 (N-15) is also recommended for detection of Pmp34 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Pmp34 siRNA (h): sc-76179, Pmp34 siRNA (m): sc-152349, Pmp34 shRNA Plasmid (h): sc-76179-SH, Pmp34 shRNA Plasmid (m): sc-152349-SH, Pmp34 shRNA (h) Lentiviral Particles: sc-76179-V and Pmp34 shRNA (m) Lentiviral Particles: sc-152349-V.

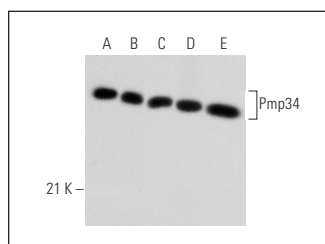
Molecular Weight of Pmp34: 34 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, NCI-H460 whole cell lysate: sc-364235 or RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Pmp34 (N-15): sc-86795. Western blot analysis of Pmp34 expression in RAW 264.7 (A), Jurkat (B), NCI-H460 (C), OVCAR-3 (D) and K-562 (E) 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.