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# Product Information

**Anti-PMP70 antibody, Mouse monoclonal**
clone 70-18, purified from hybridoma cell culture

Product Number **SAB4200181**

## Product Description

Anti-PMP70 antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the hybridoma 70-18 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a fragment of rat PMP70 (GeneID: 5825), conjugated to KLH. The corresponding sequence is identical in mouse and differs by one amino acid in human. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-PMP70 recognizes human, mouse, and rat PMP70 (not tested in other species). The antibody may be used in several immunochemical techniques including immunoblotting (~70 kDa) and immunofluorescence. Detection of the PMP70 band by immunoblotting is specifically inhibited by the immunizing peptide.

The 70 kDa peroxisomal membrane protein, PMP70, also designated PXMP1 and ABCD3 or ABD3, is one of the major components of peroxisomal membranes. The peroxisome is a multifunctional single-membrane organelle present in nearly all eukaryotic cells. One of the most important metabolic processes of the peroxisome is the β-oxidation of long and very long chain fatty acids. Peroxisomes are also involved in detoxification of the cell by the enzyme catalase that decomposes hydrogen peroxide, a toxic byproduct of cellular metabolism.[1]

PMP70 belongs to the ALD subfamily of the ATP-binding cassette (ABC) transporter superfamily. It is a half-size ABC integral membrane protein consisting of 6 transmembrane domains and one ATP-binding domain. PMP70 homodimers or heterodimers with other half-transporter molecules such as ABCD1/ALD or ABCD2/ALDR constitute the active transporter.[2] PMP70 participates in the metabolic transport of long and very long fatty acids into peroxisomes. It forms a stable complex with the adrenoleukodystrophy protein, ALDP, and several other peroxisomal proteins. ATP binding/hydrolysis by PMP70 and ALDL and their phosphorylation are involved in the regulation of fatty acid transport into peroxisomes.[3]

Mutations in the *PMP70* (*PXMP1*) gene may cause a subset of Zellweger syndrome-2, an autosomal recessive disorder that is manifested by defective import mechanisms for peroxisomal matrix enzymes.[4] Antibodies to PMP70 are useful tools for studying subcellular localization and proliferation of peroxisomes, and for their immunoisolation.

## Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

## Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

Store at –20 °C. For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

## Product Profile

Immunoblotting: a working concentration of 1-2 μg/mL is recommended using whole extracts of human HepG2 or rat PC12 cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

**References**


1. Geuze, H.J., et al., *Mol. Biol. Cell*, **14**, 2900-2907 (2003).
2. Kamijo, K., et al., *J. Biol. Chem.*, **265**, 4534-4540 (1990).
3. Tanaka, A.R., et al., *J. Biol. Chem.*, **277**, 40142-40147 (2002).
4. Gartner, J., et al., *Nat. Genet.*, **1**, 16-23 (1992).


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