

PEX5 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP9268c**Specification**

PEX5 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [P50542](#)**PEX5 Antibody (Center) Blocking Peptide - Additional Information**

Gene ID 5830

Other Names

Peroxisomal targeting signal 1 receptor, PTS1 receptor, PTS1R, PTS1-BP, Peroxin-5, Peroxisomal C-terminal targeting signal import receptor, Peroxisome receptor 1, PEX5, PXR1

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP9268c](/products/AP9268c) was selected from the Center region of human PEX5. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PEX5 Antibody (Center) Blocking Peptide - Protein Information**Name** PEX5 {ECO:0000303|PubMed:10562279, ECO:0000312|HGNC:HGNC:9719}**Function**

Receptor that mediates peroxisomal import of proteins containing a C-terminal PTS1-type tripeptide peroxisomal targeting signal (SKL-type) (PubMed:[7706321](http://www.uniprot.org/citations/7706321), PubMed:[7719337](http://www.uniprot.org/citations/7719337), PubMed:[7790377](http://www.uniprot.org/citations/7790377), PubMed:[11336669](http://www.uniprot.org/citations/11336669), PubMed:[12456682](http://www.uniprot.org/citations/12456682), PubMed:[16314507](http://www.uniprot.org/citations/16314507), PubMed:[21976670](http://www.uniprot.org/citations/21976670), PubMed:[26344566](http://www.uniprot.org/citations/26344566), PubMed:[11101887](http://www.uniprot.org/citations/11101887), PubMed:

href="http://www.uniprot.org/citations/17157249" target="_blank">17157249, PubMed:17428317). Binds to cargo proteins containing a PTS1 peroxisomal targeting signal in the cytosol, and translocates them into the peroxisome matrix by passing through the PEX13-PEX14 docking complex along with cargo proteins (PubMed:12456682, PubMed:21976670, PubMed:26344566, PubMed:17157249). PEX5 receptor is then retrotranslocated into the cytosol, leading to release of bound cargo in the peroxisome matrix, and reset for a subsequent peroxisome import cycle (PubMed:11336669, PubMed:24662292).

Cellular Location

Cytoplasm, cytosol. Peroxisome matrix. Note=Cycles between the cytosol and the peroxisome matrix (PubMed:11336669, PubMed:16314507). Following binding to cargo proteins containing a PTS1 peroxisomal targeting signal in the cytosol, recruited to the docking complex, composed of PEX13 and PEX14, leading to translocation into the peroxisome matrix along with cargo proteins (By similarity). Export and recycling to the cytosol is initiated by binding to the PEX2-PEX10- PEX12 ligase complex via its unstructured N-terminus that inserts into the ligase pore and emerges in the cytosol (By similarity). Cys-11 of PEX5 is then monoubiquitinated, promoting its extraction from peroxisomal membrane by the PEX1-PEX6 AAA ATPase complex (PubMed:16314507, PubMed:19208625, PubMed:24118911, PubMed:29884772) Extraction is accompanied by unfolding of the TPR repeats and release of bound cargo in the peroxisome matrix (By similarity). The TPR repeats refold in the cytosol and ubiquitination is removed by deubiquitinating enzymes, resetting PEX5 for a subsequent import cycle (By similarity).
{ECO:0000250|UniProtKB:A0A1L8FDW4, ECO:0000269|PubMed:11336669, ECO:0000269|PubMed:16314507, ECO:0000269|PubMed:19208625, ECO:0000269|PubMed:24118911, ECO:0000269|PubMed:29884772}

Tissue Location

Detected in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.

PEX5 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

PEX5 Antibody (Center) Blocking Peptide - Images

PEX5 Antibody (Center) Blocking Peptide - Background

PEX5 binds to the C-terminal PTS1-type tripeptide peroxisomal targeting signal (SKL-type) and plays an essential role in peroxisomal protein import.

PEX5 Antibody (Center) Blocking Peptide - References

Alencastre,I.S., et.al, J. Biol. Chem. 284 (40), 27243-27251 (2009)Shiozawa,K., et.al, J. Biol. Chem. 284 (37), 25334-25342 (2009)Grou,C.P., et.al, J. Biol. Chem. 284 (16), 10504-10513 (2009)