

ABCB7 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP6114a**Specification**

ABCB7 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession [O75027](#)
Other Accession [NP_004290](#)

ABCB7 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 22

Other Names

ATP-binding cassette sub-family B member 7, mitochondrial, ATP-binding cassette transporter 7, ABC transporter 7 protein, ABCB7, ABC7

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP6114a](/product/products/AP6114a) was selected from the C-term region of human ABCB7. 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.

ABCB7 Antibody (C-term) Blocking Peptide - Protein Information

Name ABCB7 ([HGNC:48](#))

Synonyms ABC7

Function

Exports glutathione-coordinated iron-sulfur clusters such as [2Fe-2S]-(GS)₄ cluster from the mitochondria to the cytosol in an ATP- dependent manner allowing the assembly of the cytosolic iron-sulfur (Fe/S) cluster-containing proteins and participates in iron homeostasis (PubMed:[10196363](http://www.uniprot.org/citations/10196363), PubMed:[17192393](http://www.uniprot.org/citations/17192393), PubMed:[33157103](http://www.uniprot.org/citations/33157103)). Moreover, through a functional complex formed of ABCB7, FECH and ABCB10, also plays a role in the cellular iron homeostasis, mitochondrial function and heme biosynthesis (PubMed:

[30765471](http://www.uniprot.org/citations/30765471)). In cardiomyocytes, regulates cellular iron homeostasis and cellular reactive oxygen species (ROS) levels through its interaction with COX4I1 (By similarity). May also play a role in hematopoiesis (By similarity).

Cellular Location

Mitochondrion inner membrane {ECO:0000250|UniProtKB:P40416}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P40416}

ABCB7 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

ABCB7 Antibody (C-term) Blocking Peptide - Images

ABCB7 Antibody (C-term) Blocking Peptide - Background

The membrane-associated protein ABCB7 is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MDR/TAP subfamily. Members of the MDR/TAP subfamily are involved in multidrug resistance as well as antigen presentation. This gene encodes a half-transporter involved in the transport of heme from the mitochondria to the cytosol. With iron/sulfur cluster precursors as its substrates, this protein may play a role in metal homeostasis. Mutations in this gene have been implicated in X-linked sideroblastic anemia with ataxia.

ABCB7 Antibody (C-term) Blocking Peptide - References

Allikmets, R., et al., Hum. Mol. Genet. 8(5):743-749 (1999).Csere, P., et al., FEBS Lett. 441(2):266-270 (1998).Mao, M., et al., Proc. Natl. Acad. Sci. U.S.A. 95(14):8175-8180 (1998).Shimada, Y., et al., J. Hum. Genet. 43(2):115-122 (1998).Savary, S., et al., Genomics 41(2):275-278 (1997).