

### Goat Anti-ABCD4 Antibody

Peptide-affinity purified goat antibody Catalog # AF1013a

#### Specification

# **Goat Anti-ABCD4 Antibody - Product Information**

Application Primary Accession Other Accession Reactivity Predicted Host Clonality Concentration Isotype Calculated MW WB, E <u>O14678</u> <u>NP\_005041</u>, <u>5826</u>, <u>19300 (mouse)</u>, <u>299196 (rat)</u> Human Mouse, Rat, Dog Goat Polyclonal 100ug/200ul IgG 68597

## **Goat Anti-ABCD4 Antibody - Additional Information**

Gene ID 5826

**Other Names** ATP-binding cassette sub-family D member 4, PMP70-related protein, P70R, Peroxisomal membrane protein 1-like, PXMP1-L, Peroxisomal membrane protein 69, PMP69, ABCD4, PXMP1L

**Dilution** WB~~1:1000 E~~N/A

Format

0.5 mg lgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-ABCD4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

# **Goat Anti-ABCD4 Antibody - Protein Information**

Name ABCD4 (<u>HGNC:68</u>)

Synonyms PXMP1L



#### Function

Lysosomal membrane protein that transports cobalamin (Vitamin B12) from the lysosomal lumen to the cytosol in an ATP-dependent manner (PubMed:<a

href="http://www.uniprot.org/citations/22922874" target="\_blank">22922874</a>, PubMed:<a
href="http://www.uniprot.org/citations/28572511" target="\_blank">28572511</a>, PubMed:<a
href="http://www.uniprot.org/citations/31467407" target="\_blank">31467407</a>, PubMed:<a
href="http://www.uniprot.org/citations/33845046" target="\_blank">33845046</a>). Targeted by
LMBRD1 lysosomal chaperone from the endoplasmic reticulum to the lysosomal membrane
(PubMed:<a href="http://www.uniprot.org/citations/27456980" target="\_blank">27456980</a>).
Then forms a complex with lysosomal chaperone LMBRD1 and cytosolic MMACHC to transport
cobalamin across the lysosomal membrane (PubMed:<a
href="http://www.uniprot.org/citations/25535791" target="\_blank">25535791</a>).

#### **Cellular Location**

Endoplasmic reticulum membrane; Multi-pass membrane protein. Lysosome membrane; Multi-pass membrane protein. Note=Targeted by LMBRD1 lysosomal chaperone to the lysosomal membrane.

Tissue Location Ubiquitous.

#### Goat Anti-ABCD4 Antibody - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- <u>Dot Blot</u>
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Goat Anti-ABCD4 Antibody - Images



AF1013a (0.3  $\mu$ g/ml) staining of Jurkat lysate (35  $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected with chemiluminescence.

#### Goat Anti-ABCD4 Antibody - Background

The protein encoded by this gene 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 ALD subfamily, which is involved in peroxisomal import of fatty acids and/or fatty acyl-CoAs in the organelle. All known peroxisomal ABC transporters are half transporters which require a partner half transporter molecule to form a functional homodimeric or heterodimeric transporter. The function of this peroxisomal membrane protein is unknown. However, it is speculated that it may function as a heterodimer for another peroxisomal ABC transporter and, therefore, may modify the adrenoleukodystrophy phenotype. It may also play a role in the process of peroxisome biogenesis. Alternative splicing results in at least two different transcript variants, one which is protein-coding and one which is probably not protein-coding.

## Goat Anti-ABCD4 Antibody - References

Identification of novel SNPs of ABCD1, ABCD2, ABCD3, and ABCD4 genes in patients with X-linked adrenoleukodystrophy (ALD) based on comprehensive resequencing and association studies with ALD phenotypes. Matsukawa T, et al. Neurogenetics, 2010 Jul 27. PMID 20661612.

Association study between single-nucleotide polymorphisms in 199 drug-related genes and commonly measured quantitative traits of 752 healthy Japanese subjects. Saito A, et al. J Hum Genet, 2009 Jun. PMID 19343046.

Toward a confocal subcellular atlas of the human proteome. Barbe L, et al. Mol Cell Proteomics, 2008 Mar. PMID 18029348.

Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. Kimura K, et al. Genome Res, 2006 Jan. PMID 16344560.

A human protein-protein interaction network: a resource for annotating the proteome. Stelzl U, et al. Cell, 2005 Sep 23. PMID 16169070.