

### **ABCD2 Polyclonal Antibody**

**Purified Rabbit Polyclonal Antibody (Pab)** Catalog # AP54296

#### **Specification**

### **ABCD2 Polyclonal Antibody - Product Information**

Application **Primary Accession** 

Reactivity Host

Clonality Calculated MW **Physical State** Immunogen

**Epitope Specificity** 

Isotype **Purity** 

affinity purified by Protein A

WB, IHC-P, IHC-F, IF, ICC, E

Rat, Pig, Dog, Bovine

**Rabbit Polyclonal** 83 KDa Liquid

KLH conjugated synthetic peptide derived

0.01M TBS (pH7.4) with 1% BSA, 0.02%

from human ABCD2

101-200/740

laG

Buffer

Proclin300 and 50% Glycerol.

SUBCELLULAR LOCATION Peroxisome membrane; Multi-pass

membrane protein.

**Belongs to the ABC transporter SIMILARITY** 

> superfamily. ABCD family. Peroxisomal fatty acyl CoA transporter (TC 3.A.1.203) subfamily. Contains 1 ABC transmembrane type-1 domain. Contains 1 ABC transporter

domain.

**SUBUNIT** Can form heterodimers with ABCD1/ALD

> and ABCD3/PMP70. Dimerization is necessary to form an active transporter.

**Interacts with PEX19.** 

This product as supplied is intended for Important Note research use only, not for use in human.

therapeutic or diagnostic applications.

#### **Background Descriptions**

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 this protein is speculated to function as a dimerization partner of ABCD1 and/or other peroxisomal ABC transporters. Mutations in this gene have been observed in patients with adrenoleukodystrophy, a severe demyelinating disease. This gene has been identified as a candidate for a modifier gene, accounting for the extreme variation among adrenoleukodystrophy phenotypes. This gene is also a candidate for a complement group of Zellweger syndrome, a genetically heterogeneous disorder of peroxisomal biogenesis. [provided



by RefSeq, Jul 2008]

# **ABCD2 Polyclonal Antibody - Additional Information**

Gene ID 225

#### **Other Names**

ATP-binding cassette sub-family D member 2, Adrenoleukodystrophy-like 1, Adrenoleukodystrophy-related protein, hALDR, ABCD2, ALD1, ALDL1, ALDR, ALDRP

# **Target/Specificity**

Predominantly expressed in brain and heart.

#### **Dilution**

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<span class ="dilution_WB">WB~~1:1000</span><br \><span class
="dilution_IHC-P">IHC-P~~N/A</span><br \><span class
="dilution_IHC-F">IHC-F~~N/A</span><br \><span class
="dilution_IF">IF~~1:50~200</span><br \><span class ="dilution_ICC">ICC~~N/A</span><br \><span class ="dilution_E">E~~N/A</span>
```

### **Storage**

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

### **ABCD2 Polyclonal Antibody - Protein Information**

Name ABCD2 (HGNC:66)

#### **Function**

ATP-dependent transporter of the ATP-binding cassette (ABC) family involved in the transport of very long chain fatty acid (VLCFA)- CoA from the cytosol to the peroxisome lumen (PubMed:<a href="http://www.uniprot.org/citations/21145416" target="\_blank">21145416</a>, PubMed:<a href="http://www.uniprot.org/citations/29397936" target="\_blank">29397936</a>). Like ABCD1 seems to have fatty acyl-CoA thioesterase (ACOT) and ATPase activities, according to this model, VLCFA-CoA as free VLCFA is transpoted in an ATP-dependent manner into peroxisomes after the hydrolysis of VLCFA-CoA mediated by the ACOT activity of ABCD2 (Probable) (PubMed:<a href="http://www.uniprot.org/citations/29397936" target="\_blank">29397936</a>/a>). Shows overlapping substrate specificities with ABCD1 toward saturated fatty acids (FA) and monounsaturated FA (MUFA) but has a distinct substrate preference for shorter VLCFA (C22:0) and polyunsaturated fatty acid (PUFA) such as C22:6-CoA and C24:6-CoA (in vitro) (PubMed:<a href="http://www.uniprot.org/citations/21145416" target="\_blank">21145416</a>). Thus, may play a role in regulation of VLCFAs and energy metabolism namely, in the degradation and biosynthesis of fatty acids by beta-oxidation (PubMed:<a href="http://www.uniprot.org/citations/21145416" target=" blank">21145416</a>).

#### **Cellular Location**

Peroxisome membrane; Multi-pass membrane protein

#### **Tissue Location**

Predominantly expressed in brain and heart.

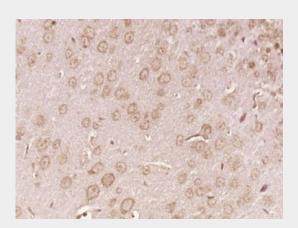


## **ABCD2 Polyclonal Antibody - Protocols**

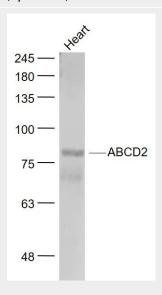
Provided below are standard protocols that you may find useful for product applications.

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

# **ABCD2 Polyclonal Antibody - Images**



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ABCD2) Polyclonal Antibody, Unconjugated (bs-10646R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Sample:

Heart (Mouse) Lysate at 40 ug

Primary: Anti- ABCD2 (bs-10646R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution





Predicted band size: 83 kD Observed band size: 83 kD