

ABCD2 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12623b**Specification**

ABCD2 Antibody (C-term) - Product Information

Application	WB, IHC-P, FC,E
Primary Accession	O9UBJ2
Other Accession	NP_005155.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	83233
Antigen Region	553-582

ABCD2 Antibody (C-term) - 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

This ABCD2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 553-582 amino acids from the C-terminal region of human ABCD2.

Dilution

WB~~1:1000
IHC-P~~1:10~50
FC~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

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

Precautions

ABCD2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

ABCD2 Antibody (C-term) - 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:[21145416](#), PubMed:[29397936](#)). 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:[29397936](#)). 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:[21145416](#)). 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:[21145416](#)).

Cellular Location

Peroxisome membrane; Multi-pass membrane protein

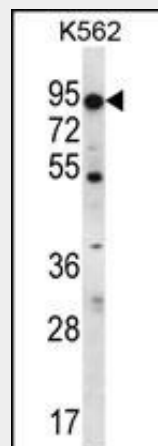
Tissue Location

Predominantly expressed in brain and heart.

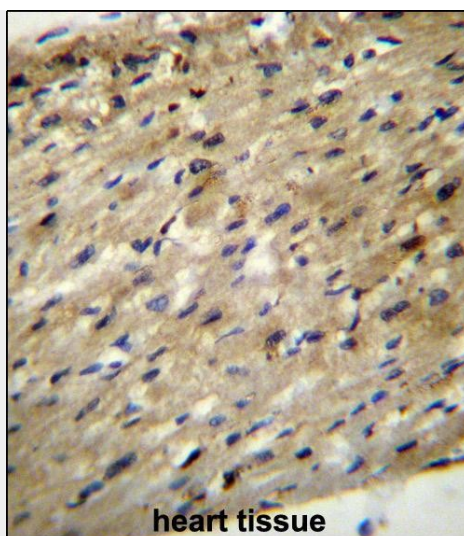
ABCD2 Antibody (C-term) - Protocols

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

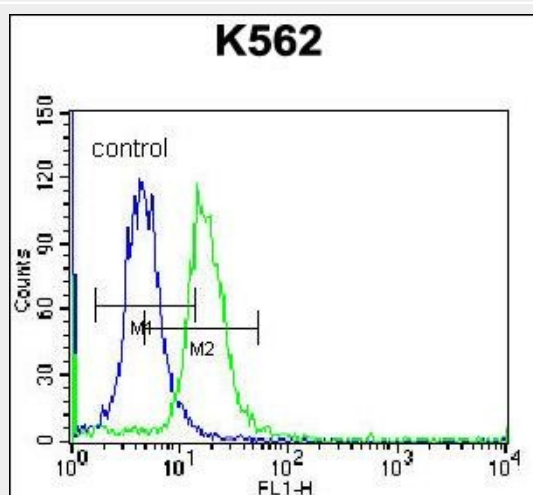
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ABCD2 Antibody (C-term) - Images

ABCD2 Antibody (C-term) (Cat. #AP12623b) western blot analysis in K562 cell line lysates (35ug/lane). This demonstrates the ABCD2 antibody detected the ABCD2 protein (arrow).



ABCD2 Antibody (C-term) (Cat. #AP12623b) immunohistochemistry analysis in formalin fixed and paraffin embedded human heart tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of ABCD2 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



ABCD2 Antibody (C-term) (Cat. #AP12623b) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated donkey-anti-rabbit secondary antibodies were used for the analysis.

ABCD2 Antibody (C-term) - 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 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.

ABCD2 Antibody (C-term) - References

Matsukawa, T., et al. Neurogenetics (2010) In press :
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Maier, E.M., et al. Biochem. Biophys. Res. Commun. 377(1):176-180(2008)
Lu, Y., et al. J. Lipid Res. 49(12):2582-2589(2008)
Petroni, A., et al. J. Inherit. Metab. Dis. 30 (5), 828 (2007) :