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ABCD2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12623b

Specification

ABCD2 Antibody (C-term) - Product Information

Application	**FC, IHC-P, WB,E**
Primary Accession	Q9UBJ2
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
FC~~1:10~50
IHC-P~~1:10~50
WB~~1:1000
E~~Use at an assay dependent concentration.

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

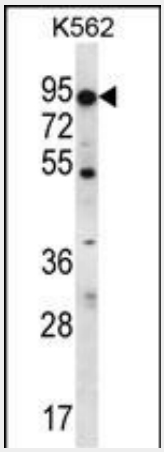
Tissue Location
Predominantly expressed in brain and heart.

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 Cytomety
- 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).

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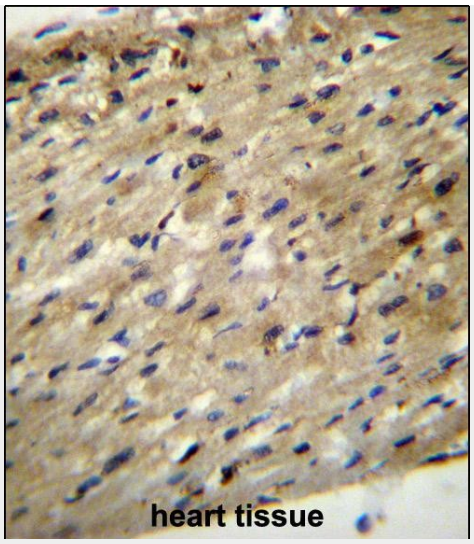
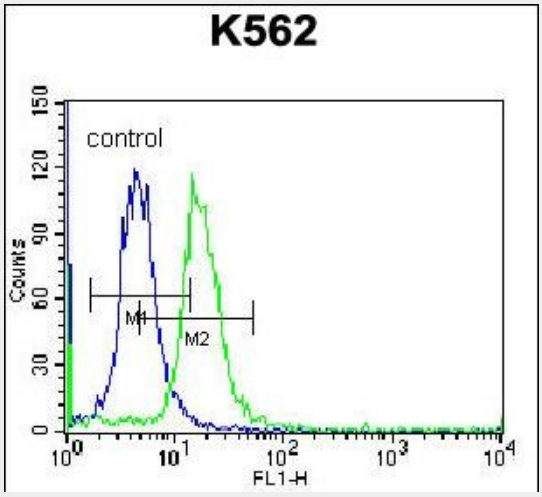


ABCD2 Antibody (C-term) (Cat. #AP12623b)immunohistochemistry analysis in formalin fixed and paraffin embedded human heart tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of ABCD2 Antibody (C-term) for immunohistochemistry. Clinical relevance 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 :
Saito, A., et al. J. Hum. Genet. 54(6):317-323(2009)
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) :