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ABCD2 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP9627c

Specification

ABCD2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q9UBJ2

ABCD2 Antibody (Center) Blocking Peptide - 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

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.

ABCD2 Antibody (Center) Blocking Peptide - 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 (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

ABCD2 Antibody (Center) Blocking Peptide - Images

ABCD2 Antibody (Center) Blocking Peptide - Background

ABCD2 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.

ABCD2 Antibody (Center) Blocking Peptide - References

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)