10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ABCD2 Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP12623b

Specification

ABCD2 Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q9UBJ2

ABCD2 Antibody (C-term) 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 (C-term) 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 (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

ABCD2 Antibody (C-term) Blocking peptide - Images

ABCD2 Antibody (C-term) Blocking peptide - Background

The protein encoded by this gene is a member of thesuperfamily of ATP-binding cassette (ABC) transporters. ABCproteins transport various molecules across extra- andintra-cellular membranes. ABC genes are divided into seven distinctsubfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). Thisprotein is a member of the ALD subfamily, which is involved inperoxisomal import of fatty acids and/or fatty acyl-CoAs in theorganelle. All known peroxisomal ABC transporters are halftransporters which require a partner half transporter molecule toform a functional homodimeric or heterodimeric transporter. Thefunction of this peroxisomal membrane protein is unknown; howeverthis protein is speculated to function as a dimerization partner ofABCD1 and/or other peroxisomal ABC transporters. Mutations in thisgene have been observed in patients with adrenoleukodystrophy, asevere demyelinating disease. This gene has been identified as acandidate for a modifier gene, accounting for the extreme variationamong adrenoleukodystrophy phenotypes. This gene is also acandidate for a complement group of Zellweger syndrome, agenetically heterogeneous disorder of peroxisomal biogenesis.

ABCD2 Antibody (C-term) Blocking peptide - 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) :