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KD-Validated Anti-ABCD1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1172

Specification

KD-Validated Anti-ABCD1 Rabbit Monoclonal Antibody - Product Information

Application	**WB**
Primary Accession	P33897
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 83 kDa, observed, 73 kDa KDa**
Gene Name	**ABCD1**
Aliases	**ABCD1; ATP Binding Cassette Subfamily D Member 1; ALDP; AMN; ALD; ATP-Binding Cassette, Sub-Family D (ALD), Member 1; ATP-Binding Cassette Sub-Family D Member 1; Adrenoleukodystrophy Protein; Adrenoleukodystrophy; ADRENOLEUKODYSTROPHY; EC 3.1.2.-; EC 7.6.2.-; ABC42**
Immunogen	**A synthesized peptide derived from human ABCD1 / ALD**

KD-Validated Anti-ABCD1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**215**

Other Names
ATP-binding cassette sub-family D member 1 {ECO:0000312|HGNC:HGNC:61}, 3.1.2.-, 7.6.2.-, Adrenoleukodystrophy protein, ALDP, ABCD1 (HGNC:61), ALD

KD-Validated Anti-ABCD1 Rabbit Monoclonal Antibody - Protein Information

Name ABCD1 (HGNC:61)

Synonyms ALD

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:11248239, PubMed:15682271, PubMed:16946495, PubMed:18757502, PubMed:21145416, PubMed:23671276, PubMed:<a

href="http://www.uniprot.org/citations/29397936" target="_blank">29397936, PubMed:33500543). Coupled to the ATP- dependent transporter activity also has a fatty acyl-CoA thioesterase activity (ACOT) and hydrolyzes VLCFA-CoA into VLCFA prior their ATP- dependent transport into peroxisomes, the ACOT activity is essential during this transport process (PubMed:29397936, PubMed:33500543). Thus, plays a role in regulation of VLCFAs and energy metabolism namely, in the degradation and biosynthesis of fatty acids by beta-oxidation, mitochondrial function and microsomal fatty acid elongation (PubMed:21145416, PubMed:23671276). Involved in several processes; namely, controls the active myelination phase by negatively regulating the microsomal fatty acid elongation activity and may also play a role in axon and myelin maintenance. Also controls the cellular response to oxidative stress by regulating mitochondrial functions such as mitochondrial oxidative phosphorylation and depolarization. And finally controls the inflammatory response by positively regulating peroxisomal beta-oxidation of VLCFAs (By similarity).

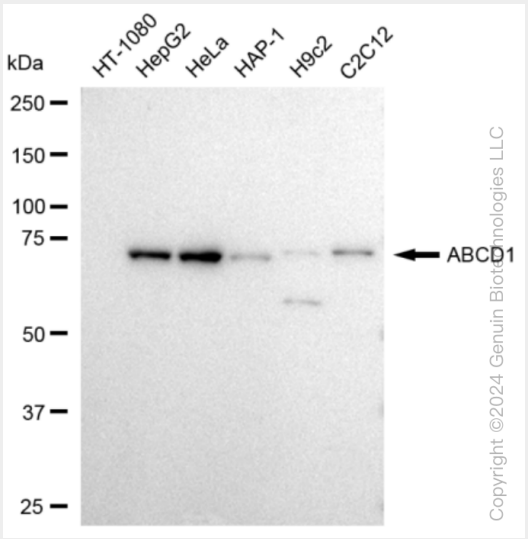
Cellular Location
Peroxisome membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Lysosome membrane; Multi-pass membrane protein Endoplasmic reticulum membrane; Multi- pass membrane protein

KD-Validated Anti-ABCD1 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-ABCD1 Rabbit Monoclonal Antibody - Images



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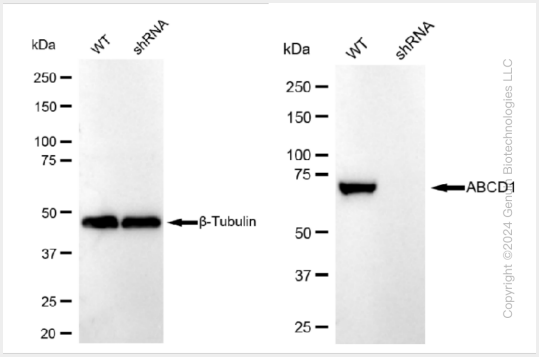
Western blotting analysis using anti-ABCD1 antibody (Cat#AGI1172). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-ABCD1 antibody (Cat#AGI1172, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-ABCD1 antibody (Cat#AGI1172). ABCD1 expression in wild type (WT) and ABCD1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-ABCD1 antibody (Cat#AGI1172, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.