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Anti-ACADVL/VLCAD Rabbit Monoclonal Antibody

Catalog # ABO16760

Product Information

Application	WB, IHC, IP
Primary Accession	P49748
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-ACADVL/VLCAD Rabbit Monoclonal Antibody . Tested in WB, IHC, IP applications. This antibody reacts with Human.

Additional Information

Gene ID	37
Other Names	Very long-chain specific acyl-CoA dehydrogenase, mitochondrial, VLCAD, 1.3.8.9, ACADVL (HGNC:92)
Calculated MW	70390
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 IP 1:50
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 32A31
Immunogen	A synthesized peptide derived from human ACADVL/VLCAD
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	ACADVL (HGNC:92)
Function	Catalyzes the first of the four reactions of the mitochondrial fatty acid beta-oxidation (FAO) pathway, which consists in the proR-proR stereospecific alpha, beta-dehydrogenation of fatty acyl-CoA thioesters using the electron

transfer flavoprotein (ETF) as their physiologic electron acceptor, resulting in the formation of trans-2-enoyl-CoA ((2E)-enoyl-CoA) (PubMed:17564966, PubMed:18227065, PubMed:26474213, PubMed:7668252, PubMed:9461620, PubMed:9599005, PubMed:9839948). The mitochondrial FAO pathway is the major energy- producing process in tissues and is performed through cycles of four consecutive reactions (PubMed:26474213, PubMed:7668252). Each FAO cycle shortens the fatty acyl-CoA by two carbons, yielding one acetyl-CoA (for the citric acid cycle), one FADH(2), and one NADH (which donate electrons to the respiratory chain for ATP production) (PubMed:26474213, PubMed:7668252). Among the different mitochondrial acyl-CoA dehydrogenases, very long-chain specific acyl-CoA dehydrogenase acts specifically on fatty acyl-CoAs with saturated 12 to 24 carbons long primary chains (PubMed:17564966, PubMed:21237683, PubMed:9839948), but can also catalyze monounsaturated fatty acids such as oleate ((9Z)-octadecenoate), (9Z)-hexadecenoate, and others (PubMed:17564966). Can use (4Z,7Z,10Z,13Z,16Z,19Z)-docosahexaenoate as substrate in vitro (which is not primarily used for energy but mainly beta-oxidized in the peroxisomes) (PubMed:17564966, PubMed:26474213). In addition, based on its established catalytic mechanism, and combined genetic interaction or mutant phenotype evidence, it is predicted to act also on substrates that have not been tested experimentally but are metabolized by mitochondrial FAO, including long-chain unsaturated fatty acids such as linoleate (9Z,12Z-octadecadienoate), linolenate (9Z,12Z,15Z-octadecatrienoate), and others (PubMed:26474213). Among the different mitochondrial acyl-CoA dehydrogenases, its FAO activity overlaps with that of ACAD9 and ACADL, but plays a primary role in tissues where it is the main long-chain ACAD expressed, such as the heart and skeletal muscle (PubMed:17564966).

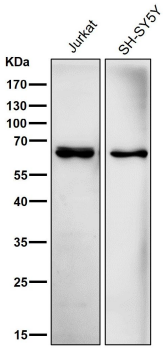
Cellular Location

Mitochondrion inner membrane; Peripheral membrane protein

Tissue Location

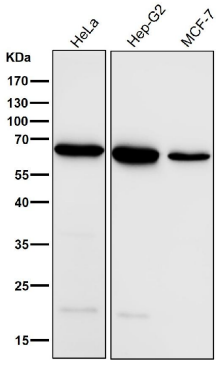
Predominantly expressed in heart and skeletal muscle (at both mRNA and protein levels) (PubMed:17564966, PubMed:8845838). Also detected in kidney and liver (at protein level) (PubMed:8845838).

Images



All lanes use the Antibody at 1:5K dilution for 1 hour at room temperature.

All lanes use the Antibody at 1:5K dilution for 1 hour at room temperature.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.