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ACADM/MCAD Rabbit mAb

Catalog # AP76375

Product Information

Application	WB, IHC-P
Primary Accession	P11310
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	46588

Additional Information

Gene ID	34
Other Names	ACADM
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	ACADM (HGNC:89)
Function	Medium-chain specific acyl-CoA dehydrogenase is one of the acyl-CoA dehydrogenases that catalyze the first step of mitochondrial fatty acid beta-oxidation (FAO), breaking down fatty acids into acetyl- CoA and allowing the production of energy from fats (PubMed:1970566, PubMed:21237683, PubMed:2251268, PubMed:8823175). The first step of FAO 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:2251268). ETF is the electron acceptor that transfers electrons to the main mitochondrial respiratory chain via ETF-ubiquinone oxidoreductase (ETF dehydrogenase) (PubMed:15159392, PubMed:25416781). Among the different mitochondrial acyl-CoA dehydrogenases, medium-chain specific acyl-CoA dehydrogenase has preference for fatty acyl-CoAs with saturated 6 to 12 carbons long primary chains, making it but can also catalyze longer chains such as C14 and C16 (PubMed:1970566, PubMed:21237683,

PubMed:2251268, PubMed:8823175).

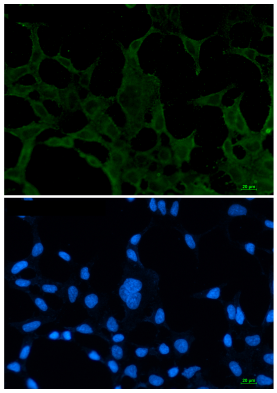
Cellular Location Mitochondrion matrix

Tissue Location Expressed ubiquitously with highest levels in heart and muscle.

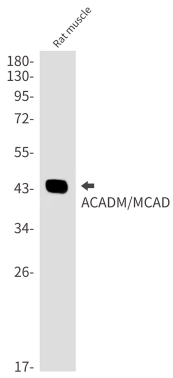
Background

This gene encodes the medium-chain specific (C4 to C12 straight chain) acyl-Coenzyme A dehydrogenase. The homotetramer enzyme catalyzes the initial step of the mitochondrial fatty acid beta-oxidation pathway. Defects in this gene cause medium-chain acyl-CoA dehydrogenase deficiency, a disease characterized by hepatic dysfunction, fasting hypoglycemia, and encephalopathy, which can result in infantile death. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

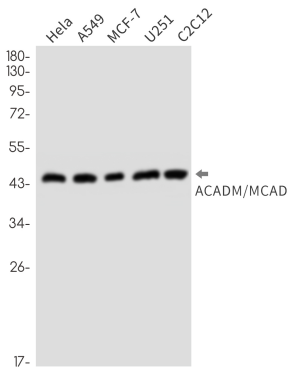
Images



Immunocytochemistry analysis of ACADM (green) in 293T using ACADM antibody,and DAPI(blue).

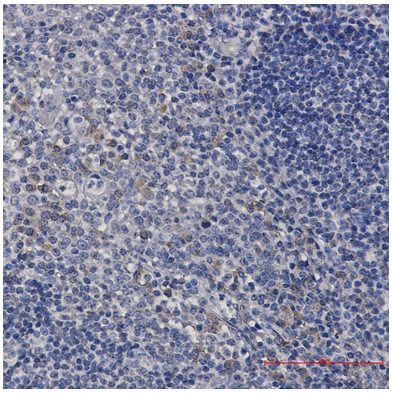


Western blot analysis of ACADM/MCAD in rat muscle lysates using ACADM/MCAD antibody.



Western blot analysis of ACADM/MCAD in Hela, A549, MCF-7, U251, C2C12 lysates using ACADM/MCAD antibody

Immunohistochemistry analysis of paraffin-embedded Human tonsil using ACADM/MCAD antibody.High-pressure and temperature Sodium Citrate



pH 6.0 was used for antigen retrieval.