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ACADM Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6827c

Product Information

Application	WB, IHC-P, FC, IF, E
Primary Accession	P11310
Other Accession	Q8HXY8
Reactivity	Human, Mouse
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB20911
Calculated MW	46588
Antigen Region	189-217

Additional Information

Gene ID	34
Other Names	Medium-chain specific acyl-CoA dehydrogenase, mitochondrial, MCAD, ACADM
Target/Specificity	This ACADM antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 189-217 amino acids from the Central region of human ACADM.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ACADM Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

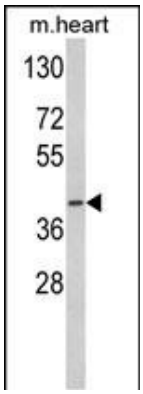
Background

ACADM is 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.

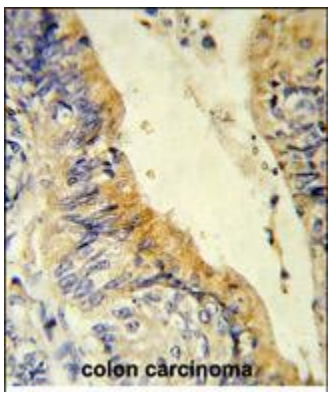
References

Ferreira,A.C., et.al., Genet. Mol. Res. 8 (2), 487-493 (2009)

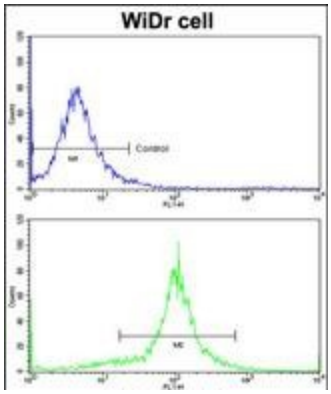
Images



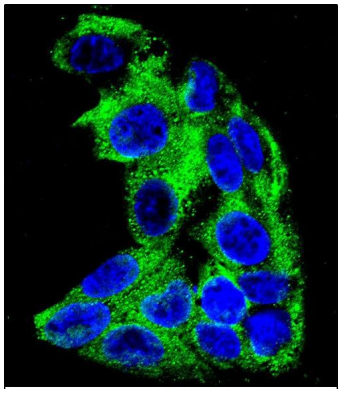
Western blot analysis of ACADM Antibody (Center) (Cat. #AP6827c) in mouse heart tissue lysates (35ug/lane). ACADM (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human colon carcinoma reacted with ACADM Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of widr cells using ACADM Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram)FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Confocal immunofluorescent analysis of ACADM Antibody (Center)(Cat#AP6827c) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).