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AMACR Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1128a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	Q9UHK6
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	2A10F3
Isotype	IgG2b
Calculated MW	42387
Description	AMACR (alpha-methylacyl-CoA racemase) has been recently described as prostate cancer-specific gene that encodes a protein involved in the beta-oxidation of branched chain fatty acids. Expression of AMACR protein is found in prostatic adenocarcinoma but not in benign prostatic tissue. It stains premalignant lesions of prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. AMACR can be used as a positive marker for PIN. Defects in AMACR are the cause of congenital bile acid synthesis defect type 4 (CBAS4); also known as cholestasis, intrahepatic, with defective conversion of trihydroxycoprostanic acid to cholic acid or trihydroxycoprostanic acid in bile. Clinical features include neonatal jaundice, intrahepatic cholestasis, bile duct deficiency and absence of cholic acid from bile.
Immunogen	Purified recombinant fragment of human AMACR expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	23600
Other Names	Alpha-methylacyl-CoA racemase, 5.1.99.4, 2-methylacyl-CoA racemase, AMACR
Dilution	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	AMACR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	AMACR
Function	Catalyzes the interconversion of (R)- and (S)-stereoisomers of alpha-methyl-branched-chain fatty acyl-CoA esters (PubMed:10655068, PubMed:11060359, PubMed:11893780, PubMed:7649182). Acts only on coenzyme A thioesters, not on free fatty acids, and accepts as substrates a wide range of alpha-methylacyl-CoAs, including pristanoyl- CoA, trihydroxycoprostanoyl-CoA (an intermediate in bile acid synthesis), and arylpropionic acids like the anti-inflammatory drug ibuprofen (2-(4-isobutylphenyl)propionic acid) but neither 3-methyl- branched nor linear-chain acyl-CoAs (PubMed:10655068, PubMed:11060359, PubMed:7649182).
Cellular Location	Peroxisome. Mitochondrion

References

1. Chen Q. Watson JT. Marengo SR. et al. Cancer Lett. 2006, Dec 8, 244 (2):274-88.Epub 2006 Feb 23. 2. Epstein JI. Herawi M. J Urol. 2006, Mar, 175 (3 Pt 1):820-34. Review.

Images

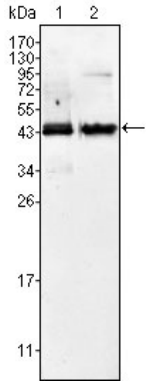


Figure 1: Western blot analysis using AMACR mouse mAb against Jurkat (1) and LNCaP (2) cell lysate.

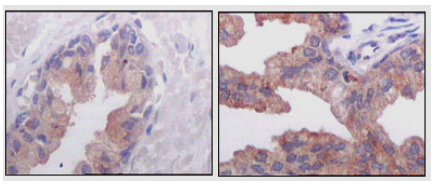


Figure 2: Immunohistochemical analysis of paraffin-embedded human normal prostate tissues (left) and prostate adenocarcinoma tissues (right), showing cytoplasmic localization using AMACR mouse mAb with DAB staining.

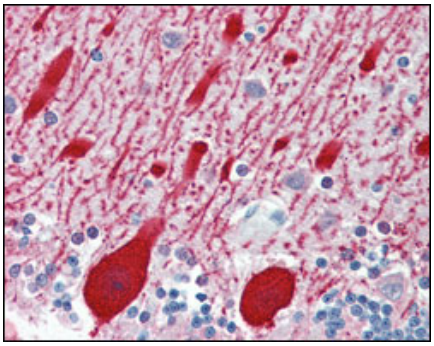
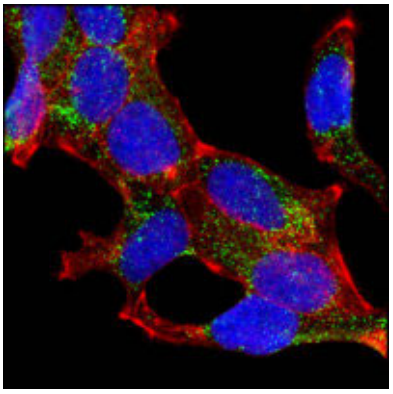


Figure 3: Immunohistochemical analysis of paraffin-embedded human brain cerebellum using AMACR mouse mAb.

Figure 4: Confocal immunofluorescence analysis of



LNCaP cells using AMACR mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

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