

**AMACR Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1128a****Specification**

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**AMACR Antibody - Product Information**

Application	WB, IHC, ICC, E
Primary Accession	<a href="#">O9UHK6</a>
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	42kDa KDa

**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.

**AMACR Antibody - 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.

## AMACR Antibody - Protein Information

**Name** AMACR

### Function

Catalyzes the interconversion of (R)- and (S)-stereoisomers of alpha-methyl-branched-chain fatty acyl-CoA esters (PubMed:<a href="http://www.uniprot.org/citations/10655068" target="\_blank">10655068</a>, PubMed:<a href="http://www.uniprot.org/citations/11060359" target="\_blank">11060359</a>, PubMed:<a href="http://www.uniprot.org/citations/7649182" target="\_blank">7649182</a>). 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:<a href="http://www.uniprot.org/citations/10655068" target="\_blank">10655068</a>, PubMed:<a href="http://www.uniprot.org/citations/11060359" target="\_blank">11060359</a>, PubMed:<a href="http://www.uniprot.org/citations/7649182" target="\_blank">7649182</a>).

### Cellular Location

Peroxisome. Mitochondrion

## AMACR 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 Cytometry](#)
- [Cell Culture](#)

## AMACR Antibody - Images

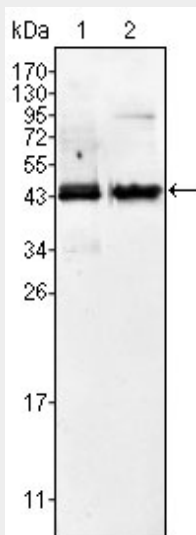


Figure 1: Western blot analysis using AMACR mouse mAb against Jurkat (1) and LNCaP (2) cell lysate.

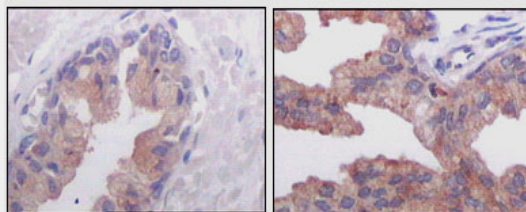


Figure 2: Immunohistochemical analysis of paraffin-embedded human normal prostate tissues (left) and prostate adenocarcinoma tissues (right), showing cytoplasmic localization using AMACR mouse mAb with DAB staining.

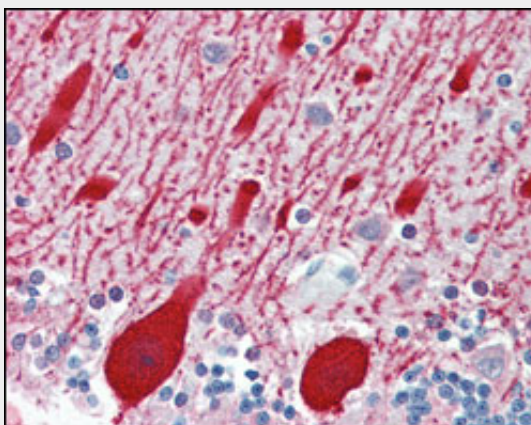


Figure 3: Immunohistochemical analysis of paraffin-embedded human brain cerebellum using AMACR mouse mAb.

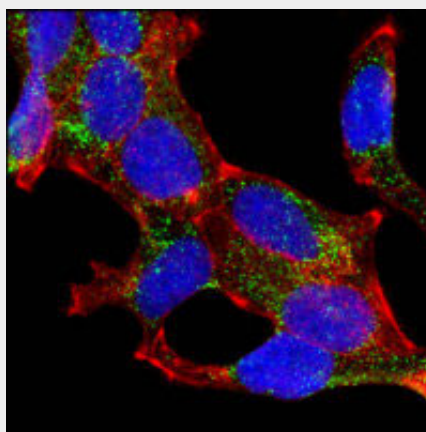


Figure 4: Confocal immunofluorescence analysis of LNCaP cells using AMACR mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

#### AMACR Antibody - 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.