

## $\alpha$ -Methylacyl-CoA racemase 1

Cat. No.:	HY-111487	
Target:	Others	
Pathway:	Others	
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.	$\alpha$ -Methylacyl-CoA racemase 1

### BIOLOGICAL ACTIVITY

<b>Description</b>	$\alpha$ -methylacyl-CoA racemase 1 is an enzyme that catalyzes a key chiral inversion step in the metabolism of branched-chain fatty acids, and used as a maker in prostate and other cancer.
<b>In Vitro</b>	$\alpha$ -methylacyl-CoA racemase protein levels are increased in all prostate and some other cancer cells and it is used as a marker. The enzyme requires no cofactors and catalyzes its reaction by a stepwise 1,1-proton transfer via an enolate intermediate. The biological role of $\alpha$ -methylacyl-CoA racemase in cancer is complex, linking lipid metabolism with nuclear receptor (e.g. FXR and PPAR) activity and expression of enzymes such as cyclooxygenase-2 (COX-2) <sup>[1]</sup> . $\alpha$ -methylacyl-CoA racemase 1 is a valuable tool to confirm the diagnosis of prostate cancer, especially if combined with basal cell markers. Microarray analysis reveals that tumours with prominent AMACR expression included adenocarcinomas of the prostate (72%), hepatocellular carcinomas (77%), papillary renal cell carcinomas (70%), and colorectal adenocarcinomas (71%) <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Lloyd MD, et al.  $\alpha$ -Methylacyl-CoA racemase (AMACR): metabolic enzyme, drug metabolizer and cancer marker P504S. *Prog Lipid Res.* 2013 Apr;52(2):220-30.
- [2]. Went PT, et al. Abundant expression of AMACR in many distinct tumour types. *Pathology.* 2006 Oct;38(5):426-32.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA