

PRODUCT INFORMATION



AMACR (N-Term) Rabbit Monoclonal Antibody (Clone RM349)

Item No. 32274

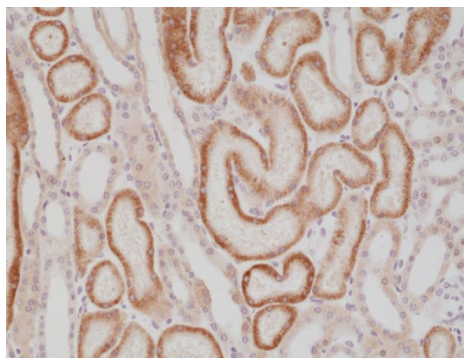
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	2-arylpropionyl-CoA Epimerase, 2-R-Ibuprofenyl racemase, α-methylacyl-CoA, P504S
Immunogen:	Peptide from the N-terminal region of human AMACR
Cross Reactivity:	(+) AMACR
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM349
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:500-1:1,000 for IHC and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of LNCaP cell lysates using AMACR (N-Term) Rabbit Monoclonal Antibody (Clone RM349) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human kidney tissue using AMACR (N-Term) Rabbit Monoclonal Antibody (Clone RM349) at a dilution of 1:1,000.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

α -methylacyl-Coenzyme A (α -methylacyl-CoA) racemase (AMACR) is an enzyme involved in the metabolism of branched chain fatty acids and 2-arylpropanoic acids (2-APAs), such as ibuprofen (Item No. 70280).¹ It is expressed in most human tissues and is localized to peroxisomes and mitochondria.^{1,2} AMACR converts R-2-methyl fatty acids to S-2-methylacyl-CoA esters via an epimerization reaction prior to their degradation by β -oxidation.¹ AMACR is overexpressed in localized and metastatic prostate cancer, as well as in a variety of other cancers.³ AMACR has been found selectively in patient-derived prostate cancer tumor tissue compared to non-cancer prostate tissue, and has been used as a biomarker of the disease.⁴ Mutations in AMACR resulting in reduced enzyme activity lead to the accumulation of R-2-methyl fatty acids and are associated with neurological and peroxisomal disorders.⁵ Cayman's AMACR (N-Term) Rabbit Monoclonal Antibody (Clone RM349) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Lloyd, M.D., Yevglevskis, M., Lee, G.L., *et al.* α -Methylacyl-CoA racemase (AMACR): Metabolic enzyme, drug metabolizer and cancer marker P504S. *Prog. Lipid Res.* **52(2)**, 220-230 (2013).
2. Amery, L., Fransen, M., De Nys, K., *et al.* Mitochondrial and peroxisomal targeting of 2-methylacyl-CoA racemase in humans. *J. Lipid Res.* **41(11)**, 1752-1759 (2000).
3. Zhou, M., Chinnaiyan, A.M., Kleer, C.G., *et al.* Alpha-methylacyl-CoA racemase: A novel tumor marker over-expressed in several human cancers and their precursor lesions. *Am. J. Surg. Pathol.* **26(7)**, 926-931 (2002).
4. Jiang, Z., Woda, B.A., Rock, K.L., *et al.* P504S: A new molecular marker for the detection of prostate carcinoma. *Am. J. Surg. Pathol.* **25(11)**, 1397-1404 (2001).
5. Kong, G., Lee, H., Tran, Q., *et al.* Current knowledge on the function of α -methyl acyl-CoA racemase in human diseases. *Front. Mol. Biosci.* **7**, 153 (2020).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM