Human α-Methylacyl-CoA Racemase/AMACR Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7508

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human α-Methylacyl-CoA Racemase/AMACR in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human α–Methylacyl–CoA Racemase/AMACR Met1-Leu382 Accession # Q9UHK6
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

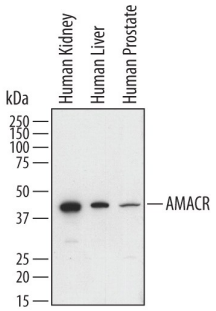
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below

DATA

Western Blot



Detection of Human α-Methylacyl-CoA Racemase/AMACR by Western Blot. Western blot shows lysates of human kidney tissue, human liver tissue, and human prostate tissue. PVDF membrane was probed with 0.2 µg/mL of Sheep Anti-Human α-Methylacyl-CoA Racemase/AMACR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7508) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for α-Methylacyl-CoA Racemase/AMACR at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

AMACR (Alpha-MethylAcyl-CoA Racemase; also 2-methylacyl racemase) is a 43-46 kDa member of the CaiB/BaiF CoA-transferase family of enzymes. It is widely expressed, being found in fibroblasts, hepatocytes, plus tumorigenic prostatic and colonic epithelium. Within these cells, it is localized to peroxisomes (organelles that participate in the breakdown fatty acids into 2-carbon blocks) and occasionally mitochondria, and appears to racemize 2-methyl-branched fatty acids. This ability is necessary for the degradation of branched fatty acids such as C19 dietary pristanic acid. Pristanic acid occurs in both an S- and R-methylated stereoisomer, but can only be initially degraded in the S- isomeric form. AMACR converts the R- to the S-isoform, initiating fatty acid processing. Human AMACR(-IA) is 382 amino acids (aa) in length. It contains an N-terminal mitochondrial targeting sequence (aa 22-85) that overlaps the enzymatic region (aa 53-231), and a C-terminal peroxisomal targeting motif (aa 379-382). There are multiple potential splice variants. Over aa 132-382, there are three aa substitutions, one that is 66 aa in length (AMACR-IB), a second that is 147 aa in length (AMACR-IIB), and a third that is 98 aa in length. Over aa 249-382, there are two aa substitutions, one that is 13 aa in length (AMACR-IIAs), and another that is 41 aa in length (AMACR-IIA). There is also a sixth potential splice variant that shows a 16 aa substitution for aa 378-382. Full-length human AMACR(-IA) shares 77% aa sequence identity with mouse AMACR.

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