**BACKGROUND**

P504S, also known as AMACR (α-methylacyl-CoA racemase), 2-methylacyl-CoA racemase or RACE, is an enzyme belonging to the caib/baiF CoA-transferase family. Localizing to the peroxisome and mitochondrion, P504S plays a role in the metabolism of branched-chain fatty acids and bile acid intermediates. More specifically, P504S catalyzes the conversion of pristanoyl-CoA and C27-bileacyl-CoAs to their (S)-stereoisomers which can then be degraded by peroxisomal β-oxidation. Mutations in the gene encoding P504S can lead to AMACR deficiency, a disease characterized by increased concentrations of pristanic acid that is associated with adult onset sensory motor neuropathy, and/or CBAS4 (congenital bile acid synthesis defect type 4), a disorder characterized by intrahepatic cholestasis, absence of cholic acid from bile, neonatal jaundice and bile duct deficiency. In addition, P504S is overexpressed in prostate cancer and is believed to be functionally important for prostate cancer cell growth.

**CHROMOSOMAL LOCATION**

Genetic locus: AMACR (human) mapping to 5p13.2; Amacr (mouse) mapping to 15 A1.

**SOURCE**

P504S (2A10F3) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 132-321 of P504S of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b, lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

P504S (2A10F3) is available conjugated to agarose (sc-81710 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-81710 HRP), 200 µg/ml, for WB, (HCP) and ELISA; to either phycoerythrin (sc-81710 AF488), Alexa Fluor® 546 (sc-81710 AF546), Alexa Fluor® 594 (sc-81710 AF594) or Alexa Fluor® 647 (sc-81710 AF647), 200 µg/ml, for WB (RGB), IF, HCP and FCM; and to either Alexa Fluor® 680 (sc-81710 AF680) or Alexa Fluor® 790 (sc-81710 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

P504S (2A10F3) is recommended for detection of P504S of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).


Molecular Weight of P504S predominant isoform: 42 kDa.

Molecular Weight of P504S other isoforms: 32/31/28/22 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

![Immunoperoxidase staining of P504S expression in Hep G2 (A), Jurkat (B) and KNKR (C) whole cell lysates.](image1)

![Western blot analysis of P504S expression in Hep G2 (A), Jurkat (B) and KNKR (C) whole cell lysates.](image2)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

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