

P504S (A-12): sc-107914

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-bile acyl-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.

REFERENCES

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3. Chen, W., et al. 2007. Molecular cloning and preliminary analysis of the human α -methylacyl-CoA racemase promoter. *Mol. Biol. Rep.* 36: 426-430.
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CHROMOSOMAL LOCATION

Genetic locus: Amacr (mouse) mapping to 15 B1.

SOURCE

P504S (A-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of P504S of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107914 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

P504S (A-12) is recommended for detection of P504S of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for P504S siRNA (m): sc-151968, P504S shRNA Plasmid (m): sc-151968-SH and P504S shRNA (m) Lentiviral Particles: sc-151968-V.

Molecular Weight of P504S predominant isoforms: 42 kDa.

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

Positive Controls: mouse liver extract: sc-2256.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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



Try **P504S (H-2): sc-514424** or **P504S (2A10F3): sc-81710**, our highly recommended monoclonal alternatives to P504S (A-12).