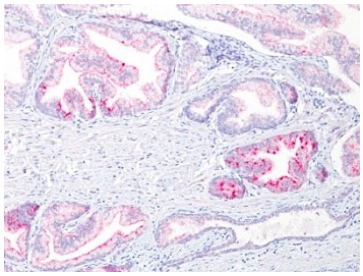
p504S Antibody Clone 13H4 / AMACR [clone 13H4] (V2505S)

Catalog No.	Formulation	Size
V2505S-0.5ML	Bioreactor concentrate with 0.05% sodium azide	0.5 ml
V2505S-0.1ML	Bioreactor concentrate with 0.05% sodium azide	0.1 ml
V2505IHC-7ML	Prediluted in 1X PBS, 0.05% sodium azide; *For IHC use only*	7 ml

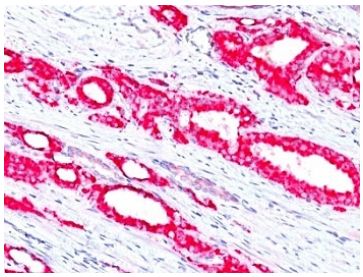
Citations (8)

Bulk quote request

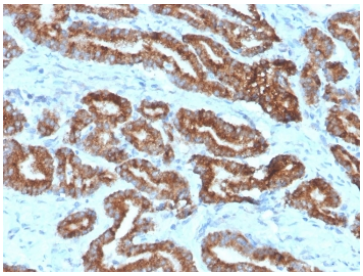
Availability	1-3 business days
Species Reactivity	Human, Mouse, Guinea pig
Format	Bioreactor concentrate
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	13H4
Purity	Unpurified high titer supernatant
UniProt	Q9UHK6
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 1:50-1:100 for 30-60 min at RT (Human) Western blot : 1:50-1:100 (Human/Mouse/Guinea pig)
Limitations	This p504S Antibody Clone 13H4 is available for research use only.



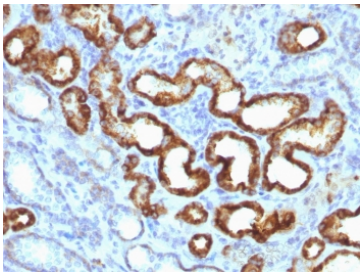
p504S Antibody Clone 13H4 Prostate Carcinoma IHC. Formalin-fixed, paraffin-embedded human prostate carcinoma stained with p504S antibody (13H4).



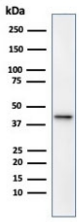
p504S Antibody Clone 13H4 Prostate Carcinoma Immunohistochemistry. Formalin-fixed, paraffin-embedded human prostate carcinoma stained with p504S antibody (13H4).



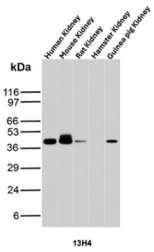
p504S Antibody Clone 13H4 Prostate Carcinoma Tissue IHC. Immunohistochemistry staining of FFPE human prostate carcinoma with p504S antibody (clone 13H4). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



p504S Antibody Clone 13H4 Renal Cell Carcinoma Tissue Immunohistochemistry. IHC staining of FFPE human renal cell carcinoma with p504S antibody (clone 13H4). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



p504S Antibody Clone 13H4 Kidney WB. Western blot testing of human kidney lysate with p504S antibody. Predicted molecular weight ~43 kDa.



p504S Antibody Kidney Tissue WB. Western blot analysis of human, mouse, rat, hamster, and guinea pig kidney tissue lysates using p504S Antibody clone 13H4 demonstrates a major band at approximately 40-42 kDa in human, mouse, rat, and guinea pig samples, consistent with the predicted molecular weight of Alpha-methylacyl-CoA racemase / AMACR. Variable signal intensity across species may reflect differential epitope conservation or tissue expression levels of this peroxisomal and mitochondrial metabolic enzyme involved in branched-chain fatty acid and bile acid metabolism.



p504S Antibody Protein Array Specificity Analysis. Analysis of protein microarray containing more than 19,000 full-length human proteins using p504S Antibody clone 13H4 identified AMACR as the top-ranked target with a Z-score of 60.59 and an S-score of 37.19, supporting highly specific recognition of Alpha-methylacyl-CoA racemase / AMACR. The Z-score represents the signal intensity generated by antibody binding relative to the mean signal across the array, while the S-score reflects the difference in signal strength between successive ranked targets. Because an S-score greater than 2.5 is considered supportive of target specificity, the markedly elevated S-score observed for clone 13H4 demonstrates strong preferential binding to AMACR relative to other proteins present on the array.

Description

p504S antibody clone 13H4 is a monoclonal antibody specific for alpha-methylacyl-CoA racemase (AMACR), commonly referred to in pathology as p504S. This mitochondrial and peroxisomal enzyme plays a role in the metabolism of branched-chain fatty acids and bile acid intermediates. p504S is highly expressed in prostatic adenocarcinoma and has become an essential marker for prostate cancer diagnostics. NSJ Bioreagents supplies p504S antibody clone 13H4 for use in oncology, pathology, and prostate disease research.

The antibody produces strong cytoplasmic staining in prostatic carcinoma cells while showing limited or absent expression in benign prostatic tissue. This specificity makes it a critical tool in distinguishing malignant lesions from benign mimics such as prostatic hyperplasia or inflammation. Pathologists often use it in combination with basal cell markers such as p63 or high molecular weight cytokeratins to improve diagnostic accuracy.

In oncology, the antibody has been used to assess prostate cancer progression and prognosis. Its detection supports studies of tumor metabolism, where AMACR overexpression is associated with altered lipid handling in cancer cells. Researchers have also applied it to evaluate the role of fatty acid metabolism in other malignancies, including colorectal carcinoma and renal cell carcinoma, where p504S is upregulated.

Beyond oncology, p504S antibody clone 13H4 provides insight into peroxisomal and mitochondrial metabolism. By labeling AMACR, it helps researchers understand how this enzyme contributes to normal lipid processing and how metabolic dysregulation may promote disease.

This antibody is validated for tissue-based studies, consistently producing clear cytoplasmic staining in prostate cancer and other AMACR-expressing tissues. Its reproducibility has led to widespread use in pathology and cancer biology. Alternate names include AMACR antibody, alpha-methylacyl-CoA racemase antibody, and prostate cancer marker p504S antibody.

For additional AMACR and p504S research antibodies validated by protein microarray specificity analysis, western blotting, and immunohistochemistry, explore the broader AMACR Antibody page featuring clone AMACR/1864.

Application Notes

Optimal dilution of the p504S Antibody Clone 13H4 should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 10-20 min followed by cooling at RT for 20 min
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Full length human recombinant protein was used as the immunogen for the p504S antibody.

Storage

Store the p504S antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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