

IDH1 Recombinant Mouse mAb

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Catalog # AP94619

Product Information

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|--------------------------------|--|
| Application | WB, IHC-P, IHC-F, IF, ICC |
| Host | Rabbit |
| Clonality | Recombinant |
| Calculated MW | 46 KDa |
| Physical State | Liquid |
| Isotype | IgG1, Kappa |
| Purity | affinity purified by Protein G |
| Buffer | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| SUBCELLULAR LOCATION | Cytoplasm. Peroxisome. |
| SIMILARITY | Belongs to the isocitrate and isopropylmalate dehydrogenases family. |
| SUBUNIT | Homodimer. |
| DISEASE | Defects in IDH1 are involved in the development of glioma (GLM) [MIM:137800]. Gliomas are central nervous system neoplasms derived from glial cells and comprise astrocytomas, glioblastoma multiforme, oligodendrogliomas, and ependymomas. Note=Mutations affecting Arg-132 are tissue-specific, and suggest that this residue plays a unique role in the development of high-grade gliomas. Mutations of Arg-132 to Cys, His, Leu or Ser abolish magnesium binding and abolish the conversion of isocitrate to alpha-ketoglutarate. Instead, alpha-ketoglutarate is converted to R(-)-2-hydroxyglutarate. Elevated levels of R(-)-2-hydroxyglutarate are correlated with an elevated risk of malignant brain tumors. |
| Important Note | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| Background Descriptions | Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses, one of which utilizes NAD(+) as the electron acceptor and the other NADP(+). Five isocitrate dehydrogenases have been reported: three NAD(+)-dependent isocitrate dehydrogenases, which localize to the mitochondrial matrix, and two NADP(+)-dependent isocitrate dehydrogenases, one of which is mitochondrial and the other predominantly cytosolic. Each NADP(+)-dependent isozyme is a homodimer. The protein encoded by this gene is the NADP(+)-dependent isocitrate dehydrogenase found in the cytoplasm and peroxisomes. It contains the PTS-1 peroxisomal targeting signal sequence. The presence of this enzyme in peroxisomes suggests roles in the regeneration of NADPH for intraperoxisomal reductions, such as the conversion of 2, 4-dienoyl-CoAs to 3-enoyl-CoAs, as well as in peroxisomal reactions that consume 2-oxoglutarate, namely the alpha-hydroxylation of phytanic acid. The cytoplasmic enzyme serves a significant role in cytoplasmic NADPH production. Alternatively spliced transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Sep 2013] |

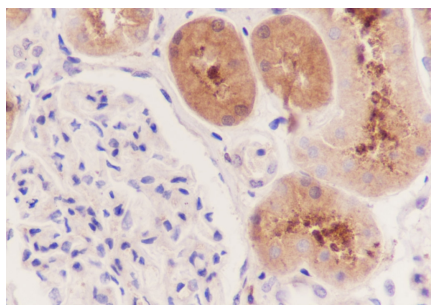
Additional Information

| | |
|-----------------|---|
| Dilution | WB=1:500-1:1000,IHC-P=1:100-500,IHC-F=,ICC/IF=1:20-1:100,IF=0 |
| Format | 0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glycerol |
| Storage | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

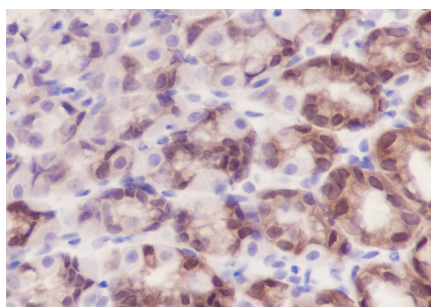
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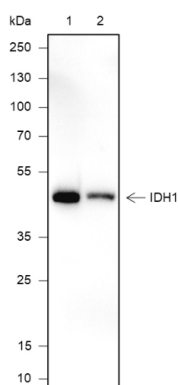
Images



Tissue: Human kidney Section type: Formalin fixed & Paraffin -embedded section Retrieval method: High temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary Ab dilution: 1:100 Primary Ab incubation condition: 1 hour at room temperature Secondary Ab: SP Kit(Mouse)(sp-0024) Counter stain: Hematoxylin (Blue) Comment: Color brown is the positive signal for AP94619

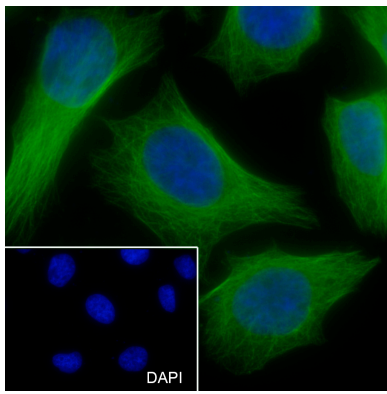


Tissue: Rat stomach Section type: Formalin fixed & Paraffin -embedded section Retrieval method: High temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary Ab dilution: 1:100 Primary Ab incubation condition: 1 hour at room temperature Secondary Ab: SP Kit(Mouse)(sp-0024) Counter stain: Hematoxylin (Blue) Comment: Color brown is the positive signal for AP94619



Blocking buffer: 5% NFDM/TBST Primary Ab dilution: 1:1000 Primary Ab incubation condition: room temperature 2h Secondary Ab: Goat Anti-Mouse IgG H&L (HRP) Lysate: 1: HeLa, 2: SH-SY5Y Protein loading quantity: 20 µg Exposure time: 10 s Predicted MW: 47 kDa Observed MW: 47 kDa

Cell line: HeLa Fixative: 4% Paraformaldehyde Permeabilization: 0.1% TritonX-100 Primary ab dilution: 1:50 Primary incubation condition: 4°C overnight Secondary ab: Goat Anti-Mouse IgG Nuclear counter stain: DAPI (Blue) Comment: Color green is the positive signal for AP94619



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.