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MDH2 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5150

Product Information

Application	FC, IHC-P, WB
Primary Accession	P40926
Other Accession	P04636, P00346, P08249, Q4R568, O02640, Q32LG3, P22133
Reactivity	Human, Mouse
Predicted	Rat, Monkey, Bovine, C.Elegans, Yeast
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35503
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	4191
Antigen Region	86-115
Other Names	MDH2; Malate dehydrogenase, mitochondrial
Dilution	FC~~1:10~50 IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This MDH2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 86-115 amino acids from the Central region of human MDH2.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MDH2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MDH2
Function	Mitochondrial malate dehydrogenase that catalyzes the reversible conversion of malate to oxaloacetate using NAD(+) as a cofactor

(PubMed:27989324). Plays a central role in the tricarboxylic acid (TCA) cycle contributing to cellular respiration and energy production via the mitochondrial electron transport chain (PubMed:35366151). Also participates in the malate-aspartate NADH shuttle, facilitating transfer of reducing equivalents between cytosol and mitochondria to maintain redox balance (NAD(+)/NADH homeostasis) and support metabolic flux between compartments (By similarity). In addition to its metabolic role, binds to RNA in cells, associating with cytosolic RNAs including tRNAs and mRNAs (PubMed:38609156).

Cellular Location Mitochondrion matrix

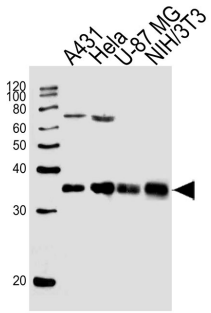
Background

MDH2 is localized to the mitochondria and may play pivotal roles in the malate-aspartate shuttle that operates in the metabolic coordination between cytosol and mitochondria.

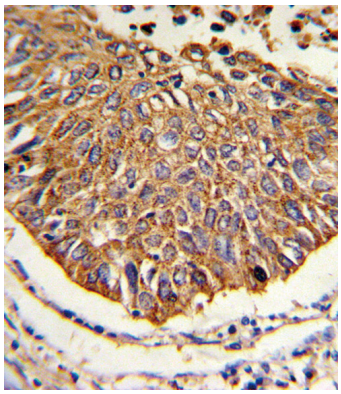
References

Rzem,R.,et.al., J. Inherit. Metab. Dis. 30 (5), 681-689 (2007)

Images

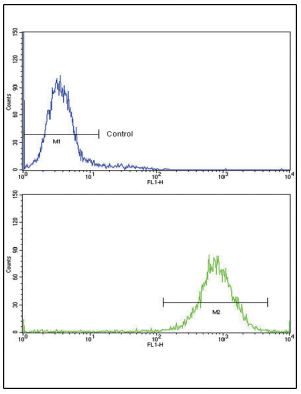


Western blot analysis of lysates from A431,Hela,U-87 MG,NIH/3T3 cell line (from left to right), using MDH2 Antibody (Center)(Cat. #AW5150). AW5150 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.



Formalin-fixed and paraffin-embedded human lung carcinoma reacted with MDH2 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Flow cytometric analysis of K562 cells using MDH2 Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram)FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



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