

### KD-Validated Anti-Malate Dehydrogenase 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody Catalog # AGI1671

#### **Specification**

### KD-Validated Anti-Malate Dehydrogenase 1 Rabbit Monoclonal Antibody - Product Information

Application WB, FC Primary Accession P40925

Reactivity Rat, Human, Mouse

Clonality Monoclonal Isotype Rabbit IgG

Calculated MW Predicted, 36 kDa, observed, 36 kDa KDa

Gene Name MD

Aliases MDH1; Malate Dehydrogenase 1; Malate

Dehydrogenase 1, NAD (Soluble); Aromatic

Alpha-Keto Acid Reductase; Malate Dehydrogenase, Cytoplasmic; Cytosolic Malate Dehydrogenase; EC 1.1.1.37; MDHA; KAR; Epididymis Secretory Protein Li 32; Malate Dehydrogenase, Peroxisomal; Diiodophenylpyruvate Reductase; Soluble Malate Dehydrogenase; EC 1.1.1.96;

HEL-S-32; MGC:1375; EIEE88; DEE88;

MDH-S; MOR2

Immunogen A synthesized peptide derived from human

MDH1

# KD-Validated Anti-Malate Dehydrogenase 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID 4190

**Other Names** 

Malate dehydrogenase, cytoplasmic, 1.1.1.37, Aromatic alpha-keto acid reductase, KAR, 1.1.1.96, Cytosolic malate dehydrogenase, MDH1 {ECO:0000303|PubMed:34012073, ECO:0000312|HGNC:HGNC:6970}

# **KD-Validated Anti-Malate Dehydrogenase 1 Rabbit Monoclonal Antibody - Protein Information**

Name MDH1 {ECO:0000303|PubMed:34012073, ECO:0000312|HGNC:HGNC:6970}

#### **Function**

Catalyzes the reduction of aromatic alpha-keto acids in the presence of NADH (PubMed:<a href="http://www.uniprot.org/citations/2449162" target="\_blank">2449162</a>, PubMed:<a href="http://www.uniprot.org/citations/3052244" target="\_blank">3052244</a>). Plays essential roles in the malate-aspartate shuttle and the tricarboxylic acid cycle, important in mitochondrial NADH supply for oxidative phosphorylation (PubMed:<a



href="http://www.uniprot.org/citations/31538237" target="\_blank">31538237</a>). Catalyzes the reduction of 2-oxoglutarate to 2- hydroxyglutarate, leading to elevated reactive oxygen species (ROS) (PubMed:<a href="http://www.uniprot.org/citations/34012073" target="\_blank">34012073</a>).

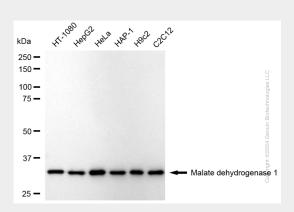
**Cellular Location** Cytoplasm, cytosol.

#### KD-Validated Anti-Malate Dehydrogenase 1 Rabbit Monoclonal Antibody - Protocols

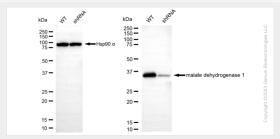
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

### KD-Validated Anti-Malate Dehydrogenase 1 Rabbit Monoclonal Antibody - Images



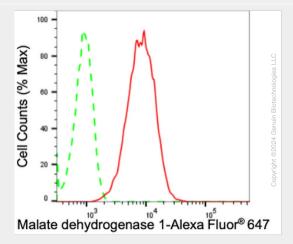
Western blotting analysis using anti-Malate dehydrogenase 1 antibody (Cat#62535). Total cell lysates (30  $\mu$ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Malate dehydrogenase 1 antibody (Cat#62535, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using NaQ $^{\text{m}}$  ECL Substrate Kit (Cat#716).



Western blotting analysis using anti-malate dehydrogenase 1 antibody (Cat#62535). Malate dehydrogenase 1 expression in wild-type (WT) and malate dehydrogenase 1 (MDH1) shRNA knockdown (KD) HeLa cells with 20  $\mu$ g of total cell lysates. Hsp90  $\alpha$  serves as a loading control. The blot was incubated with anti-malate dehydrogenase 1 antibody (Cat#62535, 1:5,000) and



HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using NaQ $^{\text{\tiny M}}$  ECL Substrate Kit (Cat#716).



Flow cytometric analysis of Malate dehydrogenase 1 expression in HepG2 cells using anti-Malate dehydrogenase 1 antibody (Cat#62535, 1:2,000). Green, isotype control; red, Malate dehydrogenase 1.