abcam

Product datasheet

Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] ab134956

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738]
Description	Rabbit monoclonal [EPR7738] to Methylmalonyl Coenzyme A mutase
Host species	Rabbit
Specificity	The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt,ICC/IF or IP
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Cow
Immunogen	Synthetic peptide within Human Methylmalonyl Coenzyme A mutase aa 50-150 (internal sequence). The exact sequence is proprietary.
Positive control	HeLa, K562, K-562, 293T and human fetal liver lysates; mouse and rat brain tissue lysates, human colon and kidney tissues.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.

Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR7738
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab134956 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

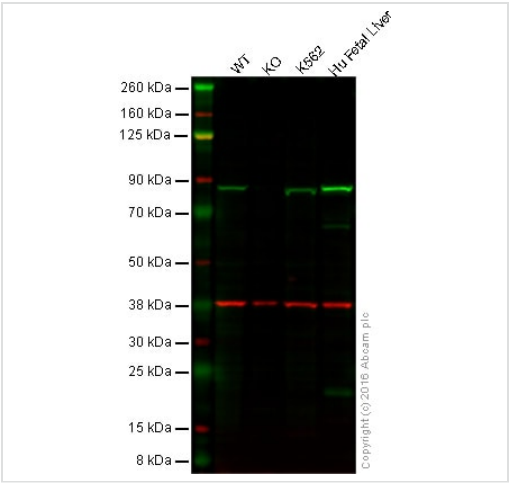
Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000 - 1/10000. Predicted molecular weight: 83 kDa.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.

Application notes Is unsuitable for Flow Cyt,ICC/IF or IP.

Target

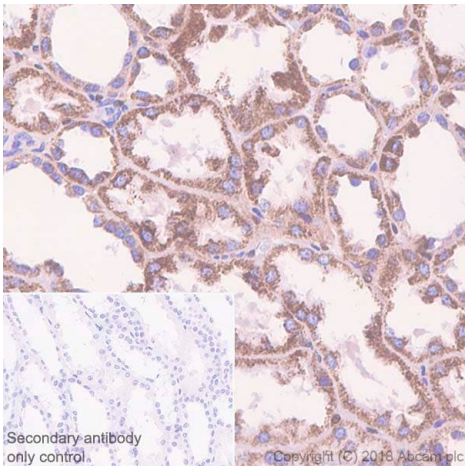
Function	Involved in the degradation of several amino acids, odd-chain fatty acids and cholesterol via propionyl-CoA to the tricarboxylic acid cycle. MCM has different functions in other species.
Involvement in disease	Defects in MUT are the cause of methylmalonic aciduria type mut (MMAM) [MIM:251000]. MMAM is an often fatal disorder of organic acid metabolism. Common clinical features include lethargy, vomiting, failure to thrive, hypotonia, neurological deficit and early death. Two forms of the disease are distinguished by the presence (mut-) or absence (mut0) of residual enzyme activity. Mut0 patients have more severe neurological manifestations of the disease than do MUT- patients. MMAM is unresponsive to vitamin B12 therapy.
Sequence similarities	Belongs to the methylmalonyl-CoA mutase family. Contains 1 B12-binding domain.
Cellular localization	Mitochondrion matrix.

Images



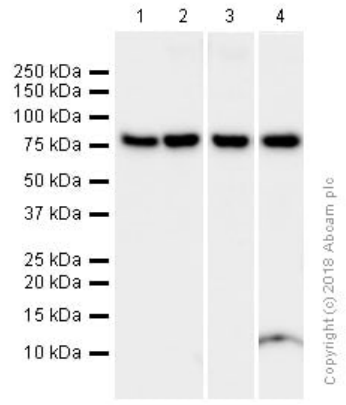
Western blot - Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: Methylmalonyl Coenzyme A mutase knockout HAP1 cell lysate (20 µg)
Lane 3: K562 cell lysate (20 µg)
Lane 4: Human liver tissue lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab134956 (unpurified) observed at 85 kDa. Red - loading control, **ab8245**, observed at 37 kDa.
ab134956 was shown to specifically react with Methylmalonyl Coenzyme A mutase when Methylmalonyl Coenzyme A mutase knockout samples were used. Wild-type and Methylmalonyl Coenzyme A mutase knockout samples were subjected to SDS-PAGE. ab134956 and **ab8245** (loading control to GAPDH) were diluted 1/1000 and 1/10000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human kidney tissue sections labeling Methylmalonyl Coenzyme A mutase with purified ab134956 at 1:50 dilution (2.96 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956)

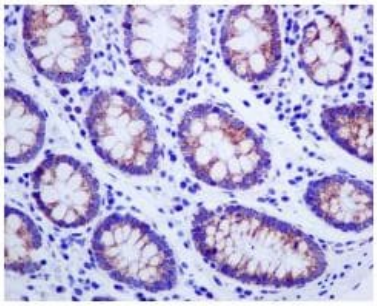
All lanes : Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956) at 1/2000 dilution (Purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2 : K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysates
Lane 3 : Mouse brain lysates
Lane 4 : Rat brain lysates

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

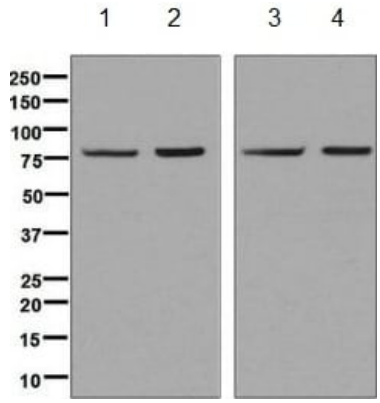
Predicted band size: 83 kDa
Observed band size: 83 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labelling Methylmalonyl Coenzyme A mutase with ab134956 (unpurified) at 1/50 dilution.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956)

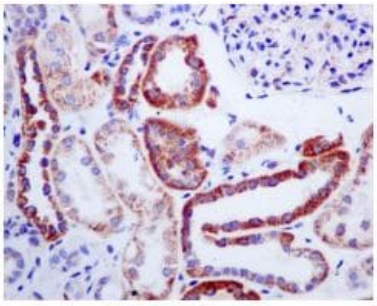
All lanes : Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956) at 1/1000 dilution (unpurified)

Lane 1 : HeLa cell lysate
Lane 2 : K562 cell lysate
Lane 3 : 293T cell lysate
Lane 4 : Human fetal liver tissue lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP labelled goat anti rabbit at 1/2000 dilution

Predicted band size: 83 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labelling Methylmalonyl Coenzyme A mutase with ab134956 (unpurified) at dilution 1/50.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

Anti-Methylmalonyl Coenzyme A mutase antibody [EPR7738] (ab134956)

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