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KD-Validated Anti-HADHA Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1958

Specification

KD-Validated Anti-HADHA Mouse Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	P40939
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 83 kDa, observed, 73 kDa KDa**
Gene Name	**HADHA**
Aliases	**HADHA; Hydroxyacyl-CoA Dehydrogenase Trifunctional Multienzyme Complex Subunit Alpha; LCHAD; LCEH; MTPA; GBP; Hydroxyacyl-Coenzyme A Dehydrogenase/3-Ketoacyl-Coenzyme A Thiolase/Enoyl-Coenzyme A HydRatase (Trifunctional Protein), Alpha Subunit; Hydroxyacyl-CoA Dehydrogenase/3-Ketoacyl-CoA Thiolase/Enoyl-CoA HydRatase (Trifunctional Protein), Alpha Subunit; Mitochondrial Trifunctional Protein, Alpha Subunit; Trifunctional Enzyme Subunit Alpha, Mitochondrial; Long-Chain-3-Hydroxyacyl-CoA Dehydrogenase; Monolysocardiolipin Acyltransferase; Long-Chain 2-Enoyl-CoA HydRatase; 78 KDa Gastrin-Binding Protein; Gastrin-Binding Protein; HADH; Mitochondrial Long-Chain L-3-Hydroxyacyl-Coenzyme A (CoA) Dehydrogenase, Alpha Subunit; Mitochondrial Long-Chain 2-Enoyl-Coenzyme A (CoA) HydRatase, Alpha Subunit; 3-Ketoacyl-Coenzyme A (CoA) Thiolase, Alpha Subunit; Mitochondrial Trifunctional Enzyme, Alpha Subunit; 3-Oxoacyl-CoA Thiolase; EC 2.3.1.-; TP-ALPHA; TP-Alpha; ECHA**
Immunogen	**Recombinant protein of human HADHA**

KD-Validated Anti-HADHA Mouse Monoclonal Antibody - Additional Information

Gene ID	**3030**

Other Names
Trifunctional enzyme subunit alpha, mitochondrial, 78 kDa gastrin-binding protein, Monolysocardiolipin acyltransferase, MLCL AT, 2.3.1.-, TP-alpha, Long-chain enoyl-CoA hydratase,

4.2.1.17, Long chain 3-hydroxyacyl-CoA dehydrogenase, 1.1.1.211, HADHA, HADH

KD-Validated Anti-HADHA Mouse Monoclonal Antibody - Protein Information

Name HADHA

Synonyms HADH

Function
Mitochondrial trifunctional enzyme catalyzes the last three of the four reactions of the mitochondrial beta-oxidation pathway (PubMed:1550553, PubMed:29915090, PubMed:30850536, PubMed:8135828, PubMed:31604922). The mitochondrial beta-oxidation pathway is the major energy-producing process in tissues and is performed through four consecutive reactions breaking down fatty acids into acetyl-CoA (PubMed:29915090). Among the enzymes involved in this pathway, the trifunctional enzyme exhibits specificity for long-chain fatty acids (PubMed:30850536, PubMed:31604922). Mitochondrial trifunctional enzyme is a heterotetrameric complex composed of two proteins, the trifunctional enzyme subunit alpha/HADHA described here carries the 2,3-enoyl-CoA hydratase and the 3-hydroxyacyl-CoA dehydrogenase activities while the trifunctional enzyme subunit beta/HADHB bears the 3-ketoacyl-CoA thiolase activity (PubMed:29915090, PubMed:30850536, PubMed:8135828). Independently of subunit beta, HADHA also exhibits a cardiolipin acyltransferase activity that participates in cardiolipin remodeling; cardiolipin is a major mitochondrial membrane phospholipid (PubMed:23152787, PubMed:31604922). HADHA may act downstream of Tafazzin/TAZ, that remodels monolysocardiolipin (MLCL) to a cardiolipin intermediate, and then HADHA may continue to remodel this species into mature tetralinoleoyl-cardiolipin (PubMed:31604922). Has also been proposed to act directly on MLCL; capable of acylating MLCL using different acyl-CoA substrates, with highest activity for oleoyl-CoA (PubMed:23152787).

Cellular Location
Mitochondrion. Mitochondrion inner membrane Note=Protein stability and association with mitochondrion inner membrane do not require HADHB.

KD-Validated Anti-HADHA Mouse Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence

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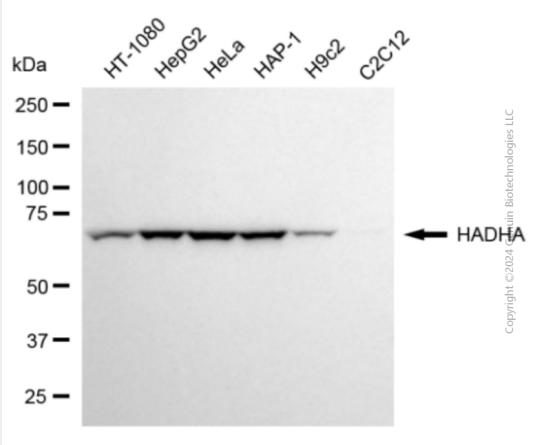
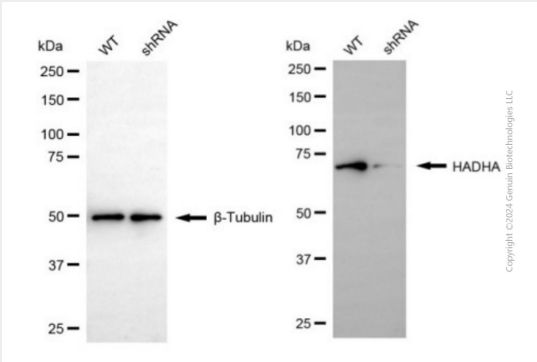
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-HADHA Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-HADHA antibody (Cat#AGI1958). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-HADHA antibody (Cat#AGI1958, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-HADHA antibody (Cat#AGI1958). HADHA expression in wild type (WT) and HADHA shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-HADHA antibody (Cat#AGI1958, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.