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KD-Validated Anti-BDH2 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2007

Specification

KD-Validated Anti-BDH2 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q9BUT1
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Mouse IgG2a**
Calculated MW	**Predicted, 27 kDa, observed, 27 kDa KDa**
Gene Name	**BDH2**
Aliases	**BDH2; 3-Hydroxybutyrate Dehydrogenase 2; SDR15C1; PRO20933; UCPA-OR; UNQ6308; DHRS6; Short Chain Dehydrogenase/Reductase Family 15C Member 1; Dehydrogenase/Reductase SDR Family Member 6; 3-Hydroxybutyrate Dehydrogenase, Type 2; (R)-Beta-Hydroxybutyrate Dehydrogenase; 4-Oxo-L-Proline Reductase; Oxidoreductase UCPA; FLJ13261; Short Chain Dehydrogenase/Reductase Family 15C, Member 1; Dehydrogenase/Reductase (SDR Family) Member 6; 3-Hydroxybutyrate Dehydrogenase Type 2; R-Beta-Hydroxybutyrate Dehydrogenase; EC 1.1.1.104; EC 1.1.1.30; EC 1.1.1.-; EFA6R**
Immunogen	**Recombinant protein of human BDH2**

KD-Validated Anti-BDH2 Mouse Monoclonal Antibody - Additional Information

Gene ID	**56898**

Other Names
Dehydrogenase/reductase SDR family member 6, 1.1.1.-, (R)-beta-hydroxybutyrate dehydrogenase, 3-hydroxybutyrate dehydrogenase type 2, 1.1.1.30, 4-oxo-L-proline reductase, 1.1.1.104, Oxidoreductase UCPA, Short chain dehydrogenase/reductase family 15C member 1, BDH2 {ECO:0000303|PubMed:35150746, ECO:0000312|HGNC:HGNC:32389}

KD-Validated Anti-BDH2 Mouse Monoclonal Antibody - Protein Information

Name BDH2 {ECO:0000303|PubMed:35150746, ECO:0000312|HGNC:HGNC:32389}

Function
NAD(H)-dependent dehydrogenase/reductase with a preference for cyclic substrates (By similarity) (PubMed:35150746).

Catalyzes stereoselective conversion of 4-oxo-L-proline to cis-4-hydroxy-L- proline, likely a detoxification mechanism for ketoprolines (PubMed:35150746). Mediates the formation of 2,5-dihydroxybenzoate (2,5-DHBA), a siderophore that chelates free cytoplasmic iron and associates with LCN2, thereby regulating iron transport and homeostasis while protecting cells against free radical-induced oxidative stress. The iron-siderophore complex is imported into mitochondria, providing an iron source for mitochondrial metabolic processes in particular heme synthesis (By similarity). May act as a 3-hydroxybutyrate dehydrogenase (PubMed:16380372).

Cellular Location
Cytoplasm.

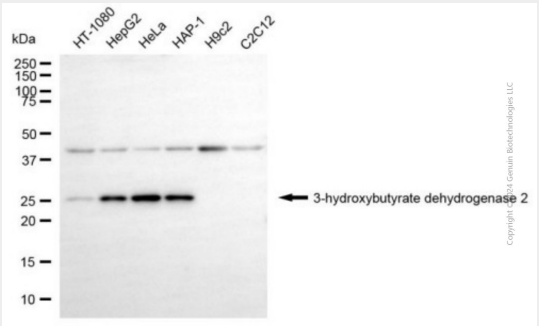
Tissue Location
Detected in liver (at protein level).

KD-Validated Anti-BDH2 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
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-BDH2 Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-3-hydroxybutyrate dehydrogenase 2 antibody (Cat#AGI2007). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-3-hydroxybutyrate dehydrogenase 2 antibody (Cat#AGI2007, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.

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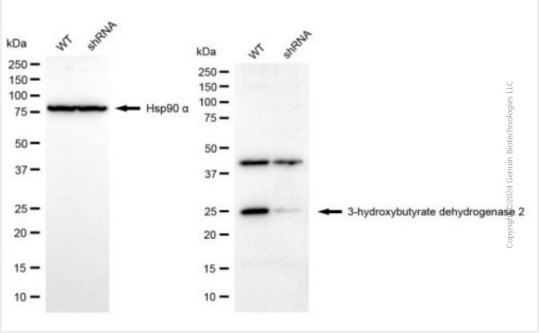
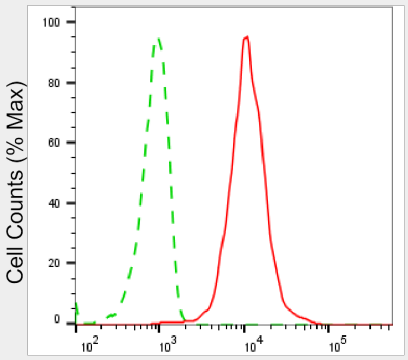


Western blotting analysis using anti-3-hydroxybutyrate dehydrogenase 2 antibody (Cat#AGI2007). 3-hydroxybutyrate dehydrogenase 2 expression in wild type (WT) and 3-hydroxybutyrate dehydrogenase 2 (BDH2) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-3-hydroxybutyrate dehydrogenase 2 antibody (Cat#AGI2007, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.



3-hydroxybutyrate dehydrogenase 2-Alexa Fluor® 647

Flow cytometric analysis of 3-hydroxybutyrate dehydrogenase 2 expression in HepG2 cells using anti-3-hydroxybutyrate dehydrogenase 2 antibody (Cat#AGI2007, 1:1,000). Green, isotype control; red, 3-hydroxybutyrate dehydrogenase 2.