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antibody and ELISA experts

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Anti-FH Antibody Picoband™ (monoclonal, 9D8)

Catalog Number: M02097

About FH

Fumarase (or fumaratehydratase) is an enzyme that catalyzes the reversible hydration/dehydration of fumarate to malate. Fumarase comes in two forms: mitochondrial and cytosolic. The mitochondrial isoenzyme is involved in the Krebs Cycle (also known as the Tricarboxylic Acid Cycle [TCA] or the Citric Acid Cycle), and the cytosolic isoenzyme is involved in the metabolism of amino acids and fumarate. Subcellular localization is established by the presence of a signal sequence on the amino terminus in the mitochondrial form, while subcellular localization in the cytosolic form is established by the absence of the signal sequence found in the mitochondrial variety. This enzyme participates in 2 metabolic pathways: citric acid cycle, reductive citric acid cycle (CO2 fixation), and is also important in renal cell carcinoma. Mutations in this gene have been associated with the development of leiomyomas in the skin and uterus in combination with renal cell carcinoma.

Overview

Product Name	Anti-FH Antibody Picoband™ (monoclonal, 9D8)
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-FH Antibody Picoband™ (monoclonal, 9D8) catalog # M02097. Tested in IF, IHC, ICC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat.
Application	IF, IHC, ICC, WB
Clonality	Monoclonal 9D8
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P07954

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human FH, which shares 100% and 97.8% amino acid (aa) sequence identity with mouse and rat FH, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2a
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunocytochemistry/Immunofluorescence, 5 ug/ml

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Anti-FH Antibody Picoband™ (monoclonal, 9D8) (M02097) Images

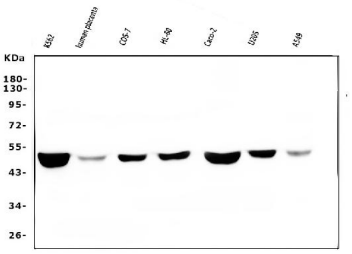

Figure 1. Western blot analysis of FH using anti-FH antibody (M02097).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: K562 whole cell lysates,
Lane 2: human placenta tissue lysates,
Lane 3: COS-7 whole cell lysates,
Lane 4: HL-60 whole cell lysates,
Lane 5: Caco-2 whole cell lysates,
Lane 6: U20S whole cell lysates,
Lane 7: A549 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-FH antigen affinity purified monoclonal antibody (Catalog # M02097) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for FH at approximately 48KD. The expected band size for FH is at 48KD.

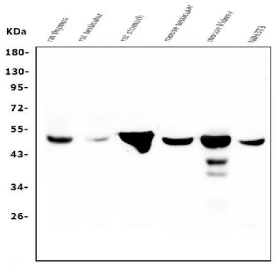

Figure 2. Western blot analysis of FH using anti-FH antibody (M02097).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: rat thymus tissue lysates,
Lane 2: rat testicular tissue lysates,
Lane 3: rat stomach tissue lysates,
Lane 4: mouse testicular tissue lysates,
Lane 5: mouse kidney tissue lysates,
Lane 6: NIH3T3 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-FH antigen affinity purified monoclonal antibody (Catalog # M02097) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for FH at approximately 48KD. The expected band size for FH is at 48KD.

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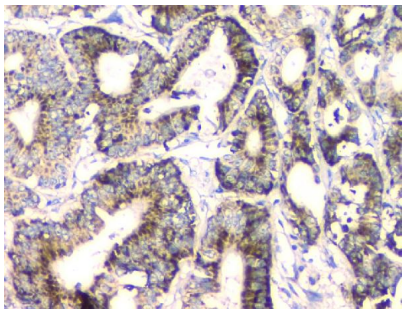

Figure 3. IHC analysis of FH using anti-FH antibody (M02097).
FH was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-FH Antibody (M02097) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

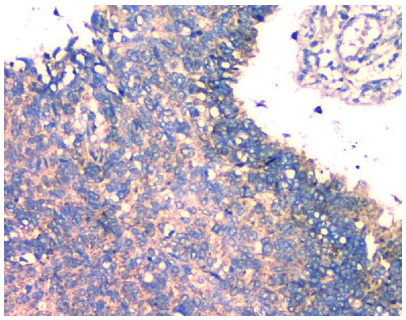

Figure 4. IHC analysis of FH using anti-FH antibody (M02097).
FH was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-FH Antibody (M02097) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

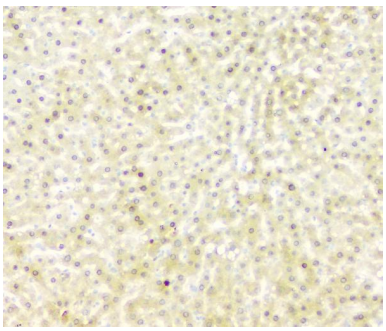

Figure 5. IHC analysis of FH using anti-FH antibody (M02097).
FH was detected in paraffin-embedded section of rat liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-FH Antibody (M02097) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

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