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Goat Anti-Fumarase / FH Antibody
Peptide-affinity purified goat antibody
Catalog # AF1449a

Specification

Goat Anti-Fumarase / FH Antibody - Product Information

Application	**WB, IHC, Pep-ELISA**
Primary Accession	P07954
Other Accession	NP_000134, 2271, 14194 (mouse), 24368 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**54637**

Goat Anti-Fumarase / FH Antibody - Additional Information

Gene ID 2271

Other Names
Fumarate hydratase, mitochondrial, Fumarase, 4.2.1.2, FH

Dilution
WB~~1:1000
IHC~~1:100~500
Pep-ELISA~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-Fumarase / FH Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-Fumarase / FH Antibody - Protein Information

Name FH {ECO:0000303|PubMed:27037871, ECO:0000312|HGNC:HGNC:3700}

Function
Catalyzes the reversible stereospecific interconversion of fumarate to L-malate (PubMed:<a

href="http://www.uniprot.org/citations/30761759" target="_blank">30761759). Experiments in other species have demonstrated that specific isoforms of this protein act in defined pathways and favor one direction over the other (Probable).

Cellular Location
[Isoform Mitochondrial]: Mitochondrion

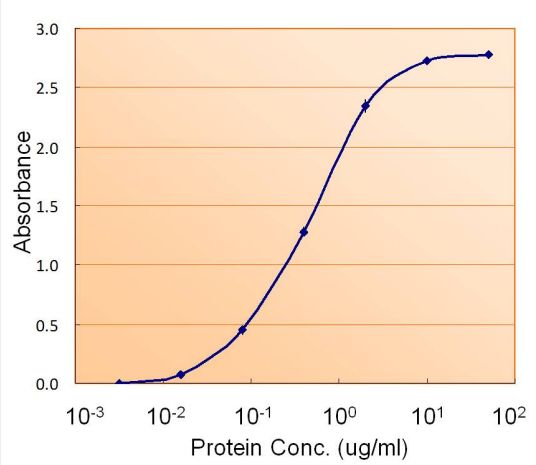
Tissue Location
Expressed in red blood cells; underexpressed in red blood cells (cytoplasm) of patients with hereditary non-spherocytic hemolytic anemia of unknown etiology.

Goat Anti-Fumarase / FH 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

Goat Anti-Fumarase / FH Antibody - Images



EB7874 (1.5ug/ml) as the reporter with EB002023 as the capture rabbit antibody (2ug/ml).

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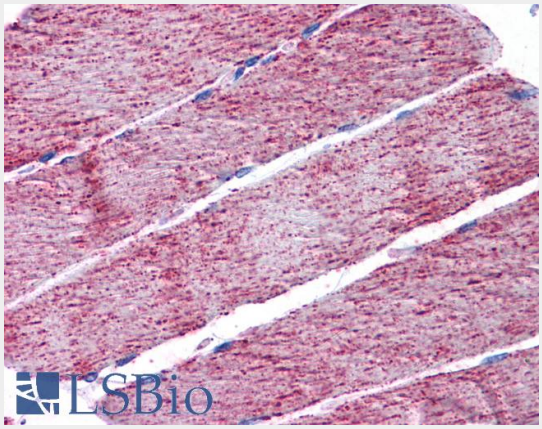
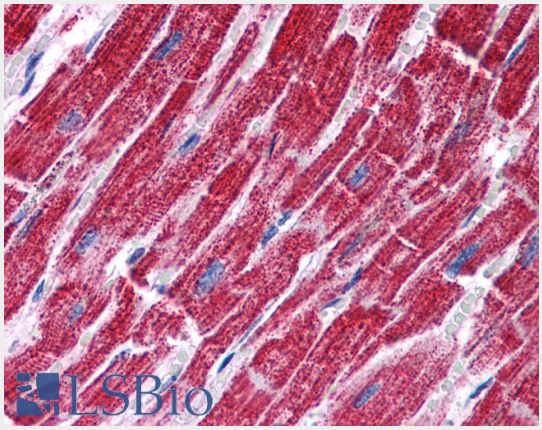
AF1449a (0.01µg/ml) staining of Human Kidney lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.



AF1449a (3.75µg/ml) staining of paraffin embedded Human Skeletal Muscle. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



AF1449a (3.75µg/ml) staining of paraffin embedded Human Heart. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Goat Anti-Fumarase / FH Antibody - Background

The protein encoded by this gene is an enzymatic component of the tricarboxylic acid (TCA) cycle, or Krebs cycle, and catalyzes the formation of L-malate from fumarate. It exists in both a cytosolic form and an N-terminal extended form, differing only in the translation start site used. The N-terminal extended form is targeted to the mitochondrion, where the removal of the extension generates the same form as in the cytoplasm. It is similar to some thermostable class II fumarases

and functions as a homotetramer. Mutations in this gene can cause fumarase deficiency and lead to progressive encephalopathy.

Goat Anti-Fumarase / FH Antibody - References

An approach based on a genome-wide association study reveals candidate loci for narcolepsy. Shimada M, et al. Hum Genet, 2010 Oct. PMID 20677014.
Fumarase: a mitochondrial metabolic enzyme and a cytosolic/nuclear component of the DNA damage response. Yogev O, et al. PLoS Biol, 2010 Mar 9. PMID 20231875.
UOK 262 cell line, fumarate hydratase deficient (FH-/FH-) hereditary leiomyomatosis renal cell carcinoma: in vitro and in vivo model of an aberrant energy metabolic pathway in human cancer. Yang Y, et al. Cancer Genet Cytogenet, 2010 Jan 1. PMID 19963135.
Follow-up examination of linkage and association to chromosome 1q43 in multiple sclerosis. McCauley JL, et al. Genes Immun, 2009 Oct. PMID 19626040.
Novel role of fumarate metabolism in dahl-salt sensitive hypertension. Tian Z, et al. Hypertension, 2009 Aug. PMID 19546378.