Electron Transfer Flavoprotein-Ubiquinone Oxidoreductase, Mitochondrial (ETFDH) ELISA Kit for Human

PRODUCT OVERVIEW

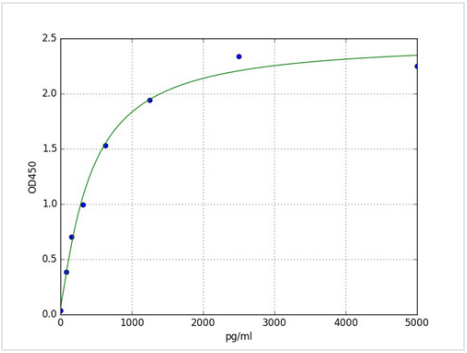
Product Name	Electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial (ETFDH), ELISA Kit
Full Product Name	Human Electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial ELISA Kit
Product Gene Name	ETFDH elisa kit
Product Synonym Names	ETFDH (Electron transfer flavoprotein-ubiquinone oxidoreductase; mitochondrial)/ETF-QO/ETF-ubiquinone oxidoreductase/ETF dehydrogenase
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	78.125-5000pg/ml
Sensitivity	46.875pg/ml
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Molecular Weight	62,825 Da
OMIM	231675
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for ETFDH elisa kit	Principle of the Assay||This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-Human ETFDH antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-Human ETFDH antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and wash with wash buffer. HRPStreptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the Human ETFDH amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of Human ETFDHcan be calculated.
Other Notes	Small volumes of ETFDH elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ETFDH purchase	MBS763588 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial (ETFDH) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing ETFDH. The ELISA analytical biochemical technique of the MBS763588 kit is based on ETFDH antibody-ETFDH antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect ETFDH antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, ETFDH. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).

Typical Data & Standard Curve

Results of a typical standard run of a Human ETFDH ELISA Kit are shown below. This standard curve was generated at our lab for demonstration purpose only. Each user should obtain their own standard curve as per experiment. (N/A=not applicable)

X	pg/ml	0	78	156	312.5	625	1250	2500	5000
Y	OD450	0.075	0.148	0.222	0.369	0.664	1.145	1.945	2.591

Typical Testing Data of ETFDH elisa kit



Typical Standard Curve of ETFDH elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ETFDH. It may not necessarily be applicable to this product.

NCBI GI #	119703746
NCBI GeneID	2110
NCBI Accession #	NP_004444.2
UniProt Secondary Accession #	Q7Z347; B4E3R9; J3KND9
UniProt Related Accession #	Q16134; AAB24227
GenBank Nucleotide #	NM_004453.3
NCBI Official Full Name	electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial isoform 1
NCBI Official Synonym Full Names	electron transfer flavoprotein dehydrogenase
NCBI Official Symbol	ETFDH
NCBI Official Synonym Symbols	MADD; ETFQO
UniProt Protein Name	Electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial
UniProt Synonym Protein Names	Electron-transferring-flavoprotein dehydrogenase; ETF dehydrogenase
UniProt Gene Name	ETFDH
UniProt Synonym Gene Names	ETF-QO; ETF-ubiquinone oxidoreductase; ETF dehydrogenase
UniProt Entry Name	ETFD_HUMAN
NCBI Protein Information	electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial
NCBI Summary for ETFDH	This gene encodes a component of the electron-transfer system in mitochondria and is essential for electron transfer from a number of mitochondrial flavin-containing dehydrogenases to the main respiratory chain. Mutations in this gene are associated with glutaric acidemia. Alternatively spliced transcript variants that encode distinct isoforms have been observed. [provided by RefSeq, Aug 2013]

UniProt Comments for ETFDH	ETFDH: Accepts electrons from ETF and reduces ubiquinone. Defects in ETFDH are the cause of glutaric aciduria type 2C (GA2C). GA2C is an autosomal recessively inherited disorder of fatty acid, amino acid, and choline metabolism. It is characterized by multiple acyl-CoA dehydrogenase deficiencies resulting in large excretion not only of glutaric acid, but also of lactic, ethylmalonic, butyric, isobutyric, 2-methyl-butyric, and isovaleric acids. Belongs to the ETF-QO/FixC family. Protein type: Membrane protein, integral; EC 1.5.5.1; Mitochondrial; Oxidoreductase Chromosomal Location of Human Ortholog: 4q32-q35 Cellular Component: integral to mitochondrial inner membrane; mitochondrial matrix; mitochondrial membrane Molecular Function: 4 iron, 4 sulfur cluster binding; electron carrier activity; electron-transferring-flavoprotein dehydrogenase activity; FAD binding; metal ion binding; oxidoreductase activity; oxidoreductase activity, oxidizing metal ions with flavin as acceptor; quinone binding; ubiquinone binding Biological Process: cellular metabolic process; fatty acid beta-oxidation using acyl-CoA dehydrogenase; response to oxidative stress Disease: Multiple Acyl-coa Dehydrogenase Deficiency
Research Articles on ETFDH	**1.** identified 61 ETFDH mutations, including 31 novel mutations, which were widely distributed within the coding sequence
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