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Recombinant human Fumarase/FH protein

Catalog Number: FMR0905

PRODUCT INFORMATION

Expression system
E.coli

Domain
44-510aa

UniProt No.
P07954

NCBI Accession No.
NP_000134

Alternative Names
Fumarate hydratase, FH, HLRCC, LRCC, MCL, MCuL1, Fumarate hydratase Fumarase, Fumarate hydratase mitochondrial, MCuL 1, Multiple hereditary cutaneous leiomyomata.

PRODUCT SPECIFICATION

Molecular Weight
50.2 kDa (467aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0)

Purity
> 95% by SDS-PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Specific activity is > 25 unit/mg, and is defined as the amount of enzyme that cleaves 1umole of L-Malate to Fumarate per minute at pH 7.5 at 37C.

Tag
Non-Tagged

Application
SDS-PAGE, Enzyme Activity

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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BACKGROUND

Description

Fumarase (Fumarate hytdratase) is an enzyme that catalyzes the reversible hydration/dehydration of fumarate to S-malate and is involved in the tricarboxylic acid (TCA), or Krebs cycle. This enzyme exists in both a cytosolic form and an N-terminal extended mitochondrial form. The N-terminal extended form is targeted to the mitochondrion, where the removal of the extension is the same form as in the cytoplasm. Fumarase deficiency can lead to progressive encephalopathy, cerebral atrophy and developmental delay and this enzyme also is thought to act as a tumor suppressor. Recombinant Fumarase was expressed in E. coli and was purified by conventional chromatography techniques.

Amino acid Sequence

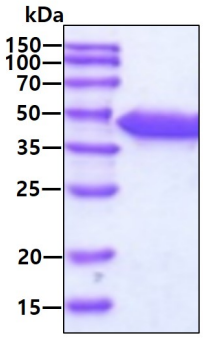
MASQNSFRIE YDTFGELKVP NDKYYGAQTV RSTMNFKIGG VTERMPTPVI KAFGILKRAA AEVNQDYGLD PKIANAIMKA ADEVAEGKLN DHFPLVVWQT GSGTQTNMNV NEVISNRAIE MLGGELGSKI PVHPNDHVNK SQSSNDTFPT AMHIAAAIEV HEVLLPGLQK LHDALDAKSK EFAQIIKIGR THTQDAVPLT LGQEFSGYVQ QVKYAMTRIK AAMPRIYELA AGGTAVGTGL NTRIGFAEKV AAKVAALTGL PFVTAPNKFE ALAAHDALVE LSGAMNTTAC SLMKIANDIR FLGSGPRSGL GELILPENEP GSSIMPGKVN PTQCEAMTMV AAQVMGNHVA VTVGGSNGHF ELNVFKPMMI KNVLHSARLL GDASVSFTEN CVVGIQANTE RINKLMNESL MLVTALNPHI GYDKAAKIAK TAHKNGSTLK ETAIELGYLT AEQFDEWVKP KDMLGPK

General References

Lehtonen R., et al. (2003) J. Med. Genet. 40 (3): e19.
Toro JR., et al. (2003) Am. J. Hum. Genet. 73(1): 95-106.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.