

Product datasheet for **RC401092**

FH (NM_000143) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	FH (NM_000143) Human Mutant ORF Clone
Mutation Description:	S187L
Affected Codon#:	187
Affected NT#:	560
Nucleotide Mutation:	FH Mutant (S187L), Myc-DDK-tagged ORF clone of Homo sapiens fumarate hydratase (FH), nuclear gene encoding mitochondrial protein as transfection-ready DNA
Effect:	Leiomyomosis nd renl ell ner
Symbol:	FH
Synonyms:	FMRD; HLRCC; HsFH; LRCC; MCL; MCUL1
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000143
ORF Size:	1530 bp
Restriction Sites:	Sgfi-Mlul



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ORF Nucleotide Sequence:

>RC401092 representing NM_000143
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTACCGAGCACTTCGGCTCCTCGCGCTCGCGTCCCCTCGTCCGGCTCCAGCCGACGCTTAGCTT
 CGGCTCCCGGCTTGGGTGGCGCGCCGTCGCCCTCGTTTTGGCCTCCGAACGCGGCTCGAATGGCAAGCCA
 AAATTCCTTCCGGATAGAATATGATACCTTTGGTGAACAAAGGTGCCAATGATAAGTATTATGGCGCC
 CAGACCGTGAGATCTACGATGAACCTTAAGATTGGAGGTGTGACAGAACGCATGCCAACCCAGTTATTA
 AAGCTTTTGGCATCTTGAAGCGAGCGCCGCTGAAGTAAACCAGGATTATGGTCTTGATCCAAAGATTGC
 TAATGCAATAATGAAGGCAGCAGATGAGGTAGCTGAAGTAAATTAATGATCATTTTCTCTCGTGGA
 TGGCAGACTGGATCAGGAACAGACAAATATGAATGTAATGAAGTCATTAGCAATAGAGCAATTGAAA
 TGTTAGGAGGTGAACCTGGCAGCAAGATACCTGTGCATCCCAACGATCATGTTAATAAAGCCAGAGCTT
 AAATGATACTTTCCACAGCAATGCACATTGCTGCTGCAATAGAAGTTCATGAAGTACTGTTACCAGGA
 CTACAGAAGTTACATGATGCTCTTGATGCAAAATCCAAAGAGTTTGCACAGATCATCAAGATTGGACGTA
 CTCATACTCAGGATGCTGTTCCACTTACTCTTGGGCAGGAATTTAGTGGTTATGTTCAACAAGTAAAATA
 TGCAATGACAAGAATAAAGCTGCCATGCCAAGAATCTATGAGCTCGCAGCTGGAGGCACTGCTGTTGGT
 ACAGGTTTAAATACTAGAATTGGCTTTGCAGAAAAGGTTGCTGCAAAAGTGGCTGCACCTACAGGCTTGC
 CTTTTGCTACTGCTCCGAATAAATTTGAAGCTCTGGCTGCTCATGACGCTCTGGTTGAGCTCAGTGGAGC
 CATGAACACTACTGCCTGCAGTCTGATGAAGATAGCAAATGATATTCGATTTTGGGTTCTGGTCTCGG
 TCAGGTCTGGGAGAATTGATCTTGCCTGAAAATGAACAGCAAGCAGTATCATGCCAGCAAGGTGAACC
 CTACTCAGTGTGAAGCAATGACCATGGTTGCAGCCCAAGTCATGGGAACCATGTTGCTGCTACTGTCGG
 AGGCAGCAATGGACATTTTGAAGTGAATGTTTTCAAGCCAATGATGATTAATAAATGTGTTACACTCAGCC
 AGGCTGCTGGGGATGCTTCAGTTTCTTTACAGAAAATGCGTGGTGGGAATCCAGGCCAATACAGAAA
 GGATCAACAAGCTGATGAATGAGTCTCTAATGTTGGTGCAGCTCTCAATCCTCATATAGGGTATGACAA
 GGCAGCAAAGATTGCTAAGACAGCACACAAAAATGGATCAACCTTAAAGGAAACTGCTATCGAATTGGC
 TATCTCACAGCAGAGCAGTTTGACGAATGGGTAAAACCTAAGGACATGCTGGTCCAAAG

AG**CGGACCG**ACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC401092 representing NM_000143
 Red=Cloning site Green=Tags(s)

MYRALRLLARSRPLVRAPAAALASAPGLGGAAVPSFWPPNAARMASQNSFRIEYDTFGELKVPNDKYYGA
 QTVRSTMNFKIGGVTERMPVPIKAFGILKRAAAEVNQDYGLDPKIANAIMKAADEVAEGLNDHFPLVV
 WQTGSGTQTNMNVNEVISNRAIEMLGELGSKIPVHPNDHVNSQSLNDTFPTAMHIAAAIEVHEVLLPG
 LQKLHDALDAKSKEFAQIIKIGRTHQTDAVPLTLGQEFSGYVQVQKYAMTRIKAAMPRIYELAAGGTAVG
 TGLNTRIGFAEKVAAKVAALTLGPFVTAPNKFEALAAHDALVELSGAMNTTACSLMKIANDIRFLGSGPR
 SGLGELILPENEPGSSIMPQVNTQCEAMTMVAQVMGNHVAVTVGGSNGHFELNVFKPMMIKNLVHSA
 RLLGDASVSFTENCVVGIQANTERINKLMNESLMLVLTALNPHIGYDKAAKIAKTAHKNSTLKETAIELG
 YLTAEQFDEWVKPKDMLGPK

SGP**TRRRLEQKLI**SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

MW: 56.1 kDa

Gene Summary: 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. [provided by RefSeq, Jul 2008]