

Product datasheet for RC401506

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OriGene Technologies, Inc.

MLH1 (NM 000249) Human Mutant ORF Clone

Product data:

Product Type: Mutant ORF Clones

Product Name: MLH1 (NM_000249) Human Mutant ORF Clone

Mutation Description: E89X
Affected Codon#: 89
Affected NT#: 265

Nucleotide Mutation: MLH1 Mutant (E89X), Myc-DDK-tagged ORF clone of Homo sapiens mutL homolog 1, colon

cancer, nonpolyposis type 2 (E. coli) (MLH1), transcript variant 1 as transfection-ready DNA

Effect: Colorel ner, non-polyposis

Symbol: MLH1

Synonyms: COCA2; FCC2; hMLH1; HNPCC; HNPCC2; MMRCS1

E. coli Selection: Kanamycin (25 ug/mL)

Mammalian Cell

Selection:

Neomycin

Vector: pCMV6-Entry (PS100001)

 Tag:
 Myc-DDK

 ACCN:
 NM_000249

ORF Size: 264 bp
Restriction Sites: Sgfl-Mlul

ORF Nucleotide >RC401506 representing NM_000249

Sequence: Red=Cloning site Blue=ORF Green=Tags(s)

 ${\tt TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC}$

GCCGCGATCGCC

GAAGATCTGGATATTGTATGTGAAAGGTTCACTACTAGTAAACTGCAGTCCTTT

AGCGGACCG ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC

TGGATTACAAGGATGACGACGA TAAGGTTTAA



MLH1 (NM_000249) Human Mutant ORF Clone - RC401506

Protein Sequence: >RC401506 representing NM_000249

Red=Cloning site Green=Tags(s)

 ${\tt MSFVAGVIRRLDETVVNRIAAGEVIQRPANAIKEMIENCLDAKSTSIQVIVKEGGLKLIQIQDNGTGIRK}$

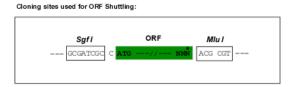
EDLDIVCERFTTSKLQSF

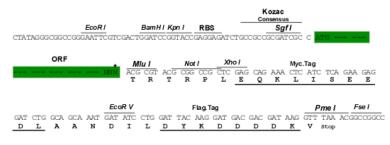
SGPTRTRRLEQKLISEEDLAANDILDYKDDDDK**V**

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:





^{*} The last codes before the Stancodes of the OR

OTI Disclaimer:

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <u>More info</u>

OTI Annotation:

This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components:

The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

RefSeq: NP 000240

RefSeq Size: 264 bp
RefSeq ORF: 2271 bp
Locus ID: 4292
Cytogenetics: 3p22.2

Domains: DNA_mis_repair, HATPase_c

Protein Families: Druggable Genome

Protein Pathways: Colorectal cancer, Endometrial cancer, Mismatch repair, Pathways in cancer



9.7 kDa

ORIGENE

MW:

Gene Summary:

The protein encoded by this gene can heterodimerize with mismatch repair endonuclease PMS2 to form MutL alpha, part of the DNA mismatch repair system. When MutL alpha is bound by MutS beta and some accessory proteins, the PMS2 subunit of MutL alpha introduces a single-strand break near DNA mismatches, providing an entry point for exonuclease degradation. The encoded protein is also involved in DNA damage signaling and can heterodimerize with DNA mismatch repair protein MLH3 to form MutL gamma, which is involved in meiosis. This gene was identified as a locus frequently mutated in hereditary nonpolyposis colon cancer (HNPCC). [provided by RefSeq, Aug 2017]