

Product datasheet for **RC401507**

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:	S93G
Affected Codon#:	93
Affected NT#:	277
Nucleotide Mutation:	MLH1 Mutant (S93G), 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:	Colorectal cancer, 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:	2268 bp
Restriction Sites:	SgfI-MluI



[View online »](#)

ORF Nucleotide
Sequence:

>RC401507 representing NM_000249
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGTCGTTCTGTCGAGGGGTTATTCGGCGGCTGGACGAGACAGTGGTGAACCGCATCGCGCGGGGGAAG
TTATCCAGCGGCCAGCTAATGCTATCAAGAGATGATTGAGAAGTGTAGATGCAAAATCCACAAGTAT
TCAAGTGATTGTTAAAGAGGGAGGCCTGAAGTTGATTCAGATCCAAGACAATGGCACCGGGATCAGGAAA
GAAGATCTGGATATTGTATGTGAAAGGTTCACTACTAGTAAACTGCAGTCCTTTGAGGATTTAGCCGGTA
TTTCTACCTATGGCTTTGAGGTGAGGCTTTGGCCAGCATAAGCCATGTGGCTCATGTTACTATTACAAC
GAAAACAGCTGATGAAAGTGTGCATACAGAGCAAGTACTCAGATGGAAAAGTAAAGCCCTCTCTAAA
CCATGTGCTGGCAATCAAGGGACCCAGATCACGGTGGAGGACCTTTTTTACAACATAGCCACGAGGAGAA
AAGCTTTAAAAAATCCAAGTGAAGAATATGGGAAAATTTGGAAGTTGTTGGCAGGTATTCAGTACACAA
TGCAGGCATTAGTTTCTCAGTTAAAAACAAGGAGAGACAGTAGCTGATGTTAGGACACTACCCAATGCC
TCAACCGTGGACAATATTCGCTCCATCTTTGAAATGCTGTTAGTCGAGAAGTATAGAAATGGATGTG
AGGATAAAACCTAGCCTTCAAATGAATGGTTACATATCCAATGCAAACTACTCAGTGAAGAAGTGCAT
CTTCTTACTCTTCATCAACCATCGTCTGGTAGAATCAACTTCCTTGAGAAAAGCCATAGAAAACAGTGTAT
GCAGCCTATTTGCCCAAAAACACACACCATTCTGTACCTCAGTTTAGAAAATCAGTCCCAGAAATGTGG
ATGTTAATGTGCACCCCAAAAGCATGAAGTTCACCTCCTGCACGAGGAGAGCATCCTGGAGCGGGTGCA
GCAGCACATCGAGAGCAAGCTCCTGGGCTCCAATTCCTCCAGGATGACTTCACCCAGACTTTGTACCA
GGACTTGCTGGCCCTCTGGGGAGATGGTTAAATCCACAACAAGTCTGACCTCGTCTTCTACTTCTGGAA
GTAGTGATAAGGTCTATGCCACCAGATGGTTCGTACAGATTCGCGGGAACAGAAGCTTGATGCATTTCT
GCAGCCTCTGAGCAAACCCCTGTCCAGTCAGCCCAAGCCATTGTCACAGAGGATAAGACAGATATTTCT
AGTGGCAGGGCTAGGCAGCAAGATGAGGAGATGCTTGAACCTCCAGCCCTGCTGAAGTGGCTGCCAAAA
ATCAGAGCTTGGAGGGGGATACAACAAGGGGACTTCAGAAAATGTGAGAGAAGAGAGGACCTACTCCAG
CAACCCAGAAAAGAGACATCGGGAAGATTCTGATGTGGAATGGTGAAGATGATTCGCGAAAAGGAAATG
ACTGCAGCTTGTACCCCGGAGAAGGATCATTAACTCACTAGTGTGTTGAGTCTCCAGGAAGAAATTA
ATGAGCAGGGACATGAGGTTCTCCGGGAGATGTTGCATAAACCCTCCTCGTGGCTGTGTGAATCCTCA
GTGGCCCTTGGCACAGCATCAAACCAAGTTATACCTTCTCAACACCACCAAGCTTAGTGAAGAACTGTT
TACCAGATACTCATTTATGATTTTGCCAAATTTGGTGTCTCAGGTTATCGGAGCCAGCACCGCTCTTTG
ACCTTGCCATGCTTGCTTAGATAGTCCAGAGAGTGGCTGGACAGAGGAAGATGGTCCCAAGAAGGACT
TGCTGAATACATTGTTGAGTTTCTGAAGAAGAAGGCTGAGATGCTTGCAGACTATTTCTCTTTGAAATT
GATGAGGAAGGGAACCTGATTGGATTACCCCTTCTGATTGACAACTATGTGCCCTTTGGAGGGACTGC
CTATCTTCATTCTCGACTAGCCACTGAGGTGAATTGGGACGAAGAAAAGGAATGTTTTGAAAGCCTCAG
TAAAGAATGCGCTATGTTCTATCCATCCGGAAGCAGTACATATCTGAGGAGTCGACCCTCTCAGGCCAG
CAGAGTGAAGTGCCTGGCTCCATTCAAACCTCTGGAAGTGGACTGTGGAACACATTGTCTATAAAGCCT
TGGCCTCACACATTCTGCCTCTAAACATTTACAGAAGATGGAATATCCTGCAGCTTGCTAACCTGCC
TGATCTATACAAAGTCTTTGAGAGGTGT

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

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:	<u>NP_000240</u>
RefSeq Size:	2268 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
MW:	83.2 kDa
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]