

Product datasheet for **RG233081**

MLH1 (NM_001258271) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MLH1 (NM_001258271) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MLH1
Synonyms:	COCA2; FCC2; hMLH1; HNPCC; HNPCC2; MMRCS1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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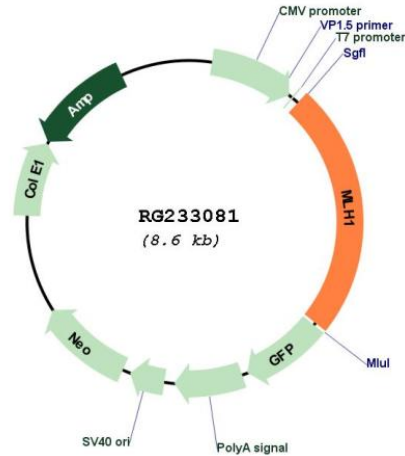
ORF Nucleotide
Sequence:

>RG233081 representing NM_001258271
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCGTTGTCGAGGGGTTATTCGGCGGCTGGACGAGACAGTGGTGAACCGCATCGCGCGGGGAAG
TTATCCAGCGGCCAGCTAATGCTATCAAAGAGATGATTGAGAAGTGTAGATGCAAAATCCACAAGTAT
TCAAGTGATTGTTAAAGAGGGAGCCTGAAGTTGATTCAGATCCAAGACAATGGCACCGGATCAGGAAA
GAAGATCTGGATATTGTATGTGAAAGTTCACTACTAGTAAACTGCAGTCCTTTGAGGATTTAGCCAGTA
TTTCTACCTATGGCTTTGAGGTGAGGCTTTGGCCAGCATAAGCCATGTGGCTCATGTTACTATTACAAC
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GTGGCCCTTGGCAGCATCAAACCAAGTTATACCTTCTCAACACCACCAAGCTTAGTGAAGAAGTGTTC
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ACCTTGCCATGCTTGCTTAGATAGTCCAGAGAGTGGCTGGACAGAGGAAGATGGTCCCAAGAAGGACT
TGCTGAATACATTGTTGAGTTTCTGAAGAAGAAGGCTGAGATGCTTGCAGACTATTTCTTCTTTGAAAT
GATGAGAGTGAAGTGCCTGGCTCCATTCAAACCTCCTGGAAGTGGACTGTGGAACACATTGTCTATAAAG
CCTTGGCCTCACACATTGCTCCTAAACATTTACAGAAGATGGAAATATCCTGCAGCTTGCTAACCT
GCCTGATCTATACAAAGTCTTTGAGAGGTGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Plasmid Map:


ACCN: NM_001258271

ORF Size: 2061 bp

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. [More info](#)

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).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001258271.1](#), [NP_001245200.1](#)

RefSeq Size: 2471 bp

RefSeq ORF:	2064 bp
Locus ID:	4292
UniProt ID:	P40692
Cytogenetics:	3p22.2
Protein Families:	Druggable Genome
Protein Pathways:	Colorectal cancer, Endometrial cancer, Mismatch repair, Pathways in cancer
Gene Summary:	<p>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]</p>