

## Product datasheet for **SC330651**

### MLH1 (NM\_001258274) Human Untagged Clone

#### Product data:

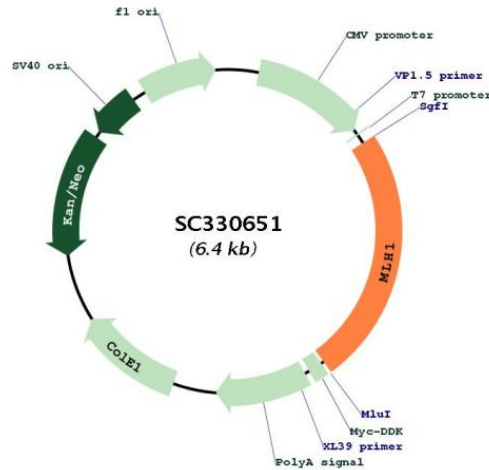
**Product Type:** Expression Plasmids  
**Product Name:** MLH1 (NM\_001258274) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** MLH1  
**Synonyms:** COCA2; FCC2; hMLH1; HNPCC; HNPCC2; MMRCS1  
**Vector:** pCMV6-Entry (PS100001)  
**Fully Sequenced ORF:** >SC330651 representing NM\_001258274.  
Blue=Insert sequence Red=Cloning site Green=Tag(s)

```
ATGAATGGTTACATATCCAATGCAAACACTCAGTGAAGAAGTGCATCTTCTTACTTTTCATCAACCAT
CGTCTGGTAGAATCAACTTCCTTGAGAAAAGCCATAGAAACAGTGTATGCAGCCTATTTGCCAAAAAC
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AAGCATGAAGTTCACCTTCTGCAGGAGAGCATCCTGGAGCGGGTGCAGCAGCACATCGAGAGCAAG
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CAGCAAGATGAGGAGATGCTTGAACCTCCAGCCCTGCTGAAGTGGCTGCCAAAAATCAGAGCTTGGAG
GGGGATACAACAAAGGGGACTTCAGAAATGTCAGAGAAGAGAGGACCTACTTCCAGCAACCCAGAAAG
AGACATCGGGAAGATTCTGATGTGGAATGGTGAAGATGATCCCGAAAGGAAATGACTGCAGCTTGT
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GAAGGGAACCTGATTGGATTACCCCTTCTGATTGACAACATGTGCCCTTTGGAGGGACTGCCTATC
TTCATTCTCGACTAGCCACTGAGGTGAATTGGGACGAAGAAAAGGAATGTTTTGAAAGCCTCAGTAAA
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AGTGAAGTGCCTGGCTCCATTCCAACTCCTGGAAGTGGACTGTGGAACACATTGTCTATAAAGCCTTG
CGCTCACACATTCTGCCTCCTAAACATTTACAGAAGATGAAATATCCTGCAGCTTGCTAACCTGCCT
GATCTATACAAAGTCTTTGAGAGGTGTAA
```

**Restriction Sites:** SgfI-MluI



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**Plasmid Map:**


**ACCN:** NM\_001258274

**Insert Size:** 1548 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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\\_001258274.1](#)

**RefSeq Size:** 2623 bp

**RefSeq ORF:** 1548 bp

**Locus ID:** 4292

**UniProt ID:** [P40692](#)

**Cytogenetics:** 3p22.2

<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Colorectal cancer, Endometrial cancer, Mismatch repair, Pathways in cancer
<b>MW:</b>	58.4 kDa
<b>Gene Summary:</b>	<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> <p>Transcript Variant: This variant (7) differs in the 5' UTR and contains an alternate exon compared to variant 1, that causes a frameshift. The resulting isoform (3) is shorter at the N-terminus compared to isoform 1. Variants 3, 4, and 6-12 all encode the same isoform (3).</p> <p>Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.</p>