

Product datasheet for **SC323792**

MLH1 (NM_000249) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MLH1 (NM_000249) Human Untagged Clone
Tag:	Tag Free
Symbol:	MLH1
Synonyms:	COCA2; FCC2; hMLH1; HNPCC; HNPCC2; MMRCS1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene sequence for NM_000249.2
 GGCACTCCGTTGAGCATCTAGACGTTTCCTTGGCTCTTCTGGCGCCAAAATGTCGTTCCG
 TGGCAGGGGTTATTCGGCGGCTGGACGAGACAGTGGTGAACCGCATCGCGGCGGGGGAAG
 TTATCCAGCGCCAGCTAATGCTATCAAAGAGATGATTGAGAAGTGTAGATGCAAAAT
 CCACAAGTATTCAAGTATTGTTAAAGAGGGAGGCCTGAAGTTGATTGAGATCCAAGACA
 ATGGCACCGGGATCAGGAAAGAAGATCTGGATATTGTATGTGAAAGGTTCACTACTAGTA
 AACTGCAGTCCTTTGAGGATTTAGCCAGTATTTCTACCTATGGCTTTCGAGGTGAGGCTT
 TGGCCAGCATAAGCCATGTGGCTCATGTTACTATTACAACGAAAACAGCTGATGGAAAGT
 GTGCATACAGAGCAAGTTACTCAGATGGAAAAGTAAAAGCCCTCCTAAAACCATGTGCTG
 GCAATCAAGGGACCCAGATCACGGTGGAGGACCTTTTTACAACATAGCCACGAGGAGAA
 AAGCTTTAAAAATCCAAGTGAAGAATATGGGAAAATTTTGAAGTTGTTGGCAGGTATT
 CAGTACACAATGCAGGCATTAGTTTCTCAGTTAAAAACAAGGAGAGACAGTAGCTGATG
 TTAGGACACTACCAATGCCTCAACCGTGGACAATATTCGCTCCATCTTTGAAAATGCTG
 TTAGTCGAGAAGTATAGAAATGGATGTGAGGATAAAACCTAGCCTTCAAATGAATG
 GTTACATATCCAATGCAAACTACTCAGTGAAGAAGTGCATCTTCTACTTTCATCAACC
 ATCGTCTGGTAGAATCAACTTCCTTGAGAAAAGCCATAGAAACAGTGTATGCAGCCTATT
 TGCCCAAAAACACACACCATTCTGTACCTCAGTTTAGAAAATCAGTCCCGAATGTGG
 ATGTTAATGTGCACCCCAAAAGCATGAAGTTCACCTTCCTGCACGAGGAGAGCATCCTGG
 AGCGGGTGCAGCAGCACATCGAGAGCAAGCTCCTGGGCTCCAATTCCTCCAGGATGTA
 TCACCCAGACTTTGCTACCAGGACTTGTGGCCCTCTGGGGAGATGGTTAAATCCACAA
 CAAGTCTGACCTCGTCTTCTACTTCTGGAAGTAGTGATAAGGTCTATGCCACCAGATGG
 TTCGTACAGATTCGCGGAACAGAAGCTTGATGCATTTCTGCAGCCTCTGAGCAAACCC
 TGTCAGTCCAGCCAGGCCATTGTACAGAGGATAAGACAGATATTTCTAGTGGCAGGG
 CTAGGCAGCAAGATGAGGAGATGCTTGAAGTCCAGCCCTGCTGAAGTGGCTGCCAAAA
 ATCAGAGCTTGGAGGGGATACAACAAAGGGGACTTCAGAAAATGTCAGAGAAGAGAGGAC
 CTACTTCCAGCAACCCAGAAAGAGACATCGGGAAGATTCTGATGTGAAAATGGTGAAG
 ATGATTCGGAAGGAAATGACTGCAGCTGTACCCCGGAGAAGGATCATTAACTCA
 CTAGTGTGTTGAGTCTCCAGGAAGAAATTAATGAGCAGGGACATGAGGTTCTCCGGGAGA
 TGTTGCATAACCACTCCTTCGTGGGCTGTGTGAATCCTCAGTGGGCTTGGCACAGCATC
 AAACCAAGTTATACCTTCTCAACACCACCAAGCTTAGTGAAGAAGTGTCTACCAGATAC
 TCATTTATGATTTTGCCAAATTTGGTGTCTCAGGTTATCGGAGCCAGCACCGCTCTTTG
 ACCTTGCCATGCTGCCTTAGATAGTCCAGAGAGTGGCTGGACAGAGGAAGATGGTCCCA
 AAGAAGGACTTGCTGAATACATTGTTGAGTTTCTGAAGAAGAAGGCTGAGATGCTTGCA
 ACTATTTCTCTTTGAAAATTGATGAGGAAGGGAACCTGATTGGATTACCCCTTCTGATTG
 ACAACTATGTGCCCTTTGGAGGGACTGCCTATCTTCATTCTTCGACTAGCCACTGAGG
 TGAATTTGGGACGAAGAAAAGGAATGTTTTGAAAGCCTCAGTAAAGAATGCGCTATGTTCT
 ATTCATCCGGAAGCAGTACATATCTGAGGAGTCGACCCTCTCAGGCCAGCAGAGTGAAG
 TGCCCTGGCTCCATTCAAACCTCTGGAAGTGGACTGTGGAACACATTGTCTATAAAGCCT
 TGCGCTCACACATTCTGCCTCTAAACATTTACAGAAGATGGAATATCCTGCAGCTTG
 CTAACCTGCCTGATCTATACAAAGTCTTTGAGAGGTGTTAAATATGGTTATTTATGCACT
 GTGGGATGTGTTCTTCTCTGTATTCCGATACAAAGTGTGTATCAAAGTGTGATAT
 ACAAAAGTGTACCAACATAAGTGTGGTAGCACTTAAGACTTATACTTGCCTTCTGATAGT
 ATTCCTTTATACACAGTGGATTGATTATAAATAAATAGATGTGCTTAACATAAAAAAAA
 AAAAAAAA

Restriction Sites: ECoRI-NOT

ACCN: NM_000249

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).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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:	<ol style="list-style-type: none"> 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:	<u>NM_000249.2</u> , <u>NP_000240.1</u>
RefSeq Size:	2524 bp
RefSeq ORF:	2271 bp
Locus ID:	4292
UniProt ID:	<u>P40692</u>
Cytogenetics:	3p22.2
Domains:	DNA_mis_repair, HATPase_c
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> <p>Transcript Variant: This variant (1) encodes the longest isoform (1).</p>