

## Product datasheet for **SC127828**

### MLH3 (NM\_014381) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MLH3 (NM_014381) Human Untagged Clone
Tag:	Tag Free
Symbol:	MLH3
Synonyms:	HNPCC7
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC127828 sequence for NM_014381 edited (data generated by NextGen Sequencing)

```

ATGATCAAGTGCCTTGTGTCAGTTGAAGTACAAGCCAAATTGCGTTTCTGGTTTGGCCATAAGC
TCCTTGGGCCAATGTGTTGAGGAACTTGCCTCAACAGTATTGATGCTGAAGCAAATGT
GTGGCTGTCAGGGTGAATATGGAACCTTCCAAGTTCAAGTGATAGACAATGGATTTGGG
ATGGGGAGTGATGATGTAGAGAAAGTGGGAAATCGTTATTTACCAGTAAATGCCACTCG
GTACAGGACTTGGAGAATCCAAGTTTTATGGTTTCCGAGGAGAGGCCTTGGCAAATATT
GCTGACATGGCCAGTGTGTGAAATTTTCGTCCAAGAAAAACAGGACAATGAAACTTTT
GTGAACTGTTTCAGAGTGGAAAAGCCCTGAAAGCTTGTGAAGCTGATGTGACTAGAGCA
AGCGCTGGGACTACTGTAAACAGTGTATAACCTATTTTACCAGCTTCTGTAAGGAGGAAA
TGCATGGACCCTAGACTGGAGTTTGAAGGTTAGGCAGAGAATAGAAGCTCTCTCACTC
ATGCACCTTCCATTTCTTTCTCTTTGAGAAATGATGTTTCTGGTTCCATGGTTCTTCAG
CTCCCTAAAACCAAAGACGTATGTTCCCGATTTTGTCAAATTTATGGATTGGGAAAGTCC
CAAAGCTAAGAGAAATAAGTTTTAAATATAAAGAGTTTGTAGCTTAGTGGCTATATCAGC
TCTGAAGCACATTACAACAAGAAATATGCAGTTTTTGTGTTGTAACAAAAGACTAGTTTTA
AGGACAAAGCTACATAAACTCATTGACTTTTTATTAAGGAAAGAAAGTATTATATGCAAG
CCAAAGAATGGTCCCACCAGTAGGCAAATGAATCAAGCTTCGGCACCGGTCTACCCCA
GAACTCTATGGCATATATGTAATTAATGTGCAGTGCCAATCTGTGAGTATGATGTGTGC
ATGGAGCCAGCCAAAACCTGATTGAATTTCAGAACTGGGACACTCTCTGTTTTGCAAT
CAGGAAGGAGTGAAAATGTTTTTAAAGCAAGAAAATTTTGTGGAATTATCAGGTGAG
GATATTAAGGAATTTAGTGAAGATAATGTTTTAGTTTATTTGATGCTACTCTTCAGAAG
CGTGTGACTTCCGATGAGAGGAGCAATTTCCAGGAAGCATGTAATAATTTTTAGATTCC
TATGAGATGTTTAAATTTGCAGTCAAAGCTGTGAAAAGAAAAACTACTGCAGAAAACGTA
AACACACAGAGTTCTAGGGATTCAGAAGCTACCAGAAAAAATACAATGATGCATTTTTG
TACATTTATGAATCAGGTGGTCCAGGCCATAGCAAATGACAGAGCCATTTTACAAAAC
AAAGACAGCTCTTGCTCAGAATCAAAGATGTTAGAACAAGAGACAATTGTAGCATCAGAA
GCTGGAGAAAATGAGAAACATAAAAAATCTTTCCTGGAACATAGCTCTTAGAAAATCCG

```



[View online »](#)

TGTGGAACCAGTTTAGAAATGTTTTTAAGCCCTTTTCAGACACCATGTCACCTTTGAGGAG  
 AGTGGGCAGGATCTAGAAATATGGAAAGAAAGTACTACTGTTAATGGCATGGCTGCCAAC  
 ATCTTGAAAAATAATAGAATTCAGAATCAACCAAGAGATTTAAAGATGCTACTGAAGTG  
 GGATGCTAGCCTCTGCCTTTTGCACAACATTATGGGGAGTACATAGTGCCTCAGACAGAG  
 AAAGAGAAAAAAAAGAATCTAGCAATTGTGGAAGAAGAAATGTTTTAGTTATGGGCGA  
 GTTAAATTATGTTCCACTGGCTTTATAACTCATGTAGTACAAAATGAAAAACTAAATCA  
 ACTGAAACAGAACATTCATTTAAAAATTTAGTTAGACCTGGTCCCACACGTGCCCAAGAA  
 ACATTTGGAAATAGAACACGTCATTCAGTTGAAACTCCAGACATCAAAGATTTAGCCAGC  
 ACTTTAAGTAAAGAATCTGGTCAATTGCCCAACAAAAAATTCGAGAACGAATATAAGT  
 TATGGGCTAGAGAATGAACCTACAGCACTTATACAATGTTTTCTGCTTTTCAGGAAGGT  
 AGCAAAAAATCACAACAGATTGCATATTATCTGATACATCCCCCTTTTCCCCTGGTAT  
 AGACACGTTTCCAATGATAGTAGGAAAACAGATAAATTAATTGGTTTTCTCCAACCAATC  
 GTCCGTAAGAAGCTAAGCTTGAGTTCACAGCTAGGATCTTTAGAGAAGTTAAGAGGCCAA  
 TATGGGAAGGTTGAAAATCCTCTGGATACAGAAGTAGAGGAAAGTAATGGAGTCACTACC  
 AATCTCAGTCTTCAAGTTGAACCTGACATTCCTGCTGAAGGACAAGAACCCTTAGAGAAC  
 TCTGATGTTTGTAAAATCACTACTATGGAGCATAGTGATTTCAGATAGTAGTTGTCAACCA  
 GCAAGCCACATCCTTGACTCAGAGAAGTTCCATTCTCCAAGGATGAAGATTGTTTAGAA  
 CAACAGATGCCTAGTTTGAGAGAAAGTCTATGACCCTGAAGGAGTTATCTCTCTTAAT  
 AGAAAACCTTTGGACCTTGAGAAGTCACTGAATCACTAGCCTCTAAATATCCAGACTG  
 AAGGGTCCGAAAGAGAAACTCAAACAATGGGGATGATGAGTCGTTTTAATGAACCTCCA  
 AATTCAGATTCAGTAGGAAAGACAGCAAGTTGTGCAGTGTGTTAACACAAGATTTTTGT  
 ATGTTATTTAACACAAGCATGAAAAACAGAGAATGGTGTCTATCCCAACATCAGATTCT  
 GCCACACAGGATAATTCCTTTAATAAAAAATAGTAAAACACATTTAACAGCAATACAACA  
 GAGAACTGTGTGATATCAGAAAACCTTTGGTATTGCCCTATAAATAATTCTAAAGTTACC  
 GGTAAAGATTCAGATGTTCTTATCAGAGCCTCAGAACAACAGATAGGAAGTCTTGACTCT  
 CCCAGTGGAAATGTTAATGAATCCGGTAGAAGATGCCACAGGTGACCAAAATGGAATTTGT  
 TTTTCAGAGTGAGGAATCTAAAGCAAGAGCTTGTCTGAAACTGAAGAGTCAAACACGTGT  
 TGTTTCAGATTGGCAGCGGCAATTCGATGTAGCCCTGGGAAGAATGGTTTTATGTCAACAA  
 ATGACTGGACTCAGCACATTCATTGCCCAACTGAGGACATTCAGGCTGCTTGTACTAAA  
 GACCTGACAACTGTGGCTGTGGATGTTGTAAGTGAATGGTCTCAGTACAGGTGTCAA  
 CCTTTTAGAAGCGACCTTGTCTTCTTCTTCCCTCCGAGAGCTCGAGCAGAGAGGACTGTG  
 ATGAGACAGGATAACAGAGATACTGTGGATGACTGTTAGTAGCGAATCGCTTCAGTCT  
 TTGTTCTCAGAATGGGACAATCCAGTATTTGCCCGTTATCCAGAGGTTGCTGTTGATGTA  
 AGCAGTGGCCAGGCTGAGAGCTTAGCAGTTAAAATTCACAACATCTTGTATCCCTATCGT  
 TTCACCAAGGAATGATTCATTCATGCAGGTTCTCCAGCAAGTAGATAACAAGTTTATT  
 GCCTGTTTGATGAGCACTAAGACTGAAGAGAATGGCGAGGAGATTCTACGAGAAGCAA  
 CAGGCACAAGGCTCTGGTCGGAAAAAATACTGTCTTCTACTCTAATTCCTCCGCTAGAG  
 ATAACAGTGACAGAGGAACAAAGGAGACTCTTATGGTGTACCACAAAAATCTGGAAGAT  
 CTGGGCCTTGAATTTGTATTTCCAGACACTAGTATTCTCTGGTCCTTGTGGAAAAAGTA  
 CCACTATGTTTTGTGAAAGAGAAGCCAATGAACTTCGGAGAGGAAGATCTACTGTGACC  
 AAGAGTATTGTGGAGGAATTTATCCGAGAACAACCTGGAGCTACTCCAGACCACCGGAGGC  
 ATCCAAGGACATTGCCACTGACTGTCCAGAAGGTGTTGGCATCCCAAGCCTGCCATGGG  
 GCCATTAAGTTTAAATGATGGCCTGAGCTTACAGGAAAGTTGCCGCCTTATTGAAGCTCTG  
 TCCTCATGCCAGCTGCCATTCAGTGTGCTCACGGGAGACCTTCTATGCTGCCGTTAGCT  
 GACATAGACCACTTGGAACAGGAAAAACAGATTAACCCCAACCTCACTAACTTCGCAAA  
 ATGGCCAGGCCTGGCGTCTCTTTGAAAAGCAGAGTGTGATACAAGGCAGAGCCTGCAG  
 CAGTCCATGCCTCCCTGTGAGCCACCATGA

Clone variation with respect to NM\_014381.2  
 1687 c=>t;2476 a=>g;4263 a=>g

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_014381 unedited  
 NGGTTCACAATTGTATACGACTCACTATAGGCGGCCGGAATTCGCACGAGCGCACGAGC  
 CTCAAGACCAGGTGCGCGCGTCCGCGTCCGAGGCGGTTGGTGTCCGAGAATTTGTTAAGC  
 GGGACTCCAGGCAATATTTCCAGTCAGAGAAGGAAACCAGTGCCTGGCATTCTCACCAT  
 CTTTCTACCTACCATGATCAAGTGCTTGTCAAGTGAAGTACAAGCCAAATTCGTTCTGG  
 TTTGGCCATAAGCTCCTTGGGCCAATGTGTTGAGGAACTTGCCCTCAACAGTATTGATGC  
 TGAAGCAAAATGTGTGGCTGTCAGGGTGAATATGGAAACCTTCCAAGTTCAAGTGATAGA  
 CAATGGATTTGGGATGGGGAGTGATGATGTAGAGAAAGTGGGAAATCGTTATTTACCAG  
 TAAATGCCACTCGGTACAGGACTTGGAGAATCCAAGTTTTATGGTTTCCGAGGAGAGGC  
 CTTGGCAAATATTGCTGACATGGCCAGTGTGTGGAAATTTCTGCCAAGAAAAACAGGAC  
 AATGAAAATTTTGTGAACTGTTTCCAGAGTGGAAAAGCCCTGAAAGCTTGTGAAGCTGA  
 TGTGACTAGAGCAAGCGCTGGGACTACTGTAACAGTGTATAACCTATTTTACCAGCTNTC  
 CTGTAGGAGGAAATGCATGGACCCTAGACTGGAGTTTGAAGGTTAGGCAGAGAATAGA  
 AGCTCTCTCACTCATGCACCCTCCATTTCTTTCTTTGAGAAATGATGTTTCTGGTTC  
 CATGGTTCTCAGCTCCCCTAAACCAAAGACGTATGTTCCCGATTTTGTCAATTTATGGA  
 TGGNGAAAGTCCCAAAGCTAAGAGAATAAGTTTAAATTTAAAGAGTTGAGCTTATGGCTT  
 ATCAGCTCTGAGCCCTTACACAAGAATTGCAGTTTTA

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_014381 unedited  
 ACCGCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTCAAAGTGCATTAAT  
 TTTATCATTAAATAAGTAGCAAAAAGGTAGATACTATATAGCAACCTTCTGTGCCATGGA  
 TGCAAATGAATGAATTGTCTTTAGGCTTGAATTCATCTGGCTACTCAACTAGGGGAATC  
 ATCTGCTCAAGAAAGACTGATACAGAGAGCCCTGCTGTCTAAGCTGCTCAGGGACTGG  
 GCTGATTCAGTCAGGGCCGTGCTGGTACCTGCTGCTGCTCTCTGCTCAGAGGCATAC  
 AGTGAACATCCCTTTGTTCCCTTTAGACCAGTGATTCTGTCTTCAAGTGGTGGCTCACAGG  
 AGGCATGGACTGTTGCAGGCCTGCTGCTGTATCACACTCTGCTTTCTCCAAGCACACGC  
 CAGTCTGGGCCCTTCCGCTCAATTCCTGCGGCCCTTATCCCTTTTCCCTGTCCCT  
 CTCCCCCCCCCTCTCCCTCCCTCTCTCCCTCTCCCTCTCCCTCTCCCTTTTCCCTTTCC  
 CCTCCCCCATTCCCTCCATTCCCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT  
 CCTTCTTTCT  
 TCCCCCTTCCCCCATCT  
 TCATTTCTTCT  
 CTCCCT  
 CCCTTCT  
 CCATCCCCCTCTTTCTTTCTTTTACTCCCCCCCCCCCCCTCTCTCTTTCACCTCCCC  
 CTCTTACTCCTCATTACT

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_014381

**Insert Size:**

4700 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\\_014381.1](#), [NP\\_055196.1](#)

**RefSeq Size:** 4895 bp

**RefSeq ORF:** 4290 bp

**Locus ID:** 27030

**Cytogenetics:** 14q24.3

**Domains:** HATPase\_c

**Protein Families:** Druggable Genome

**Protein Pathways:** Mismatch repair

**Gene Summary:** This gene is a member of the MutL-homolog (MLH) family of DNA mismatch repair (MMR) genes. MLH genes are implicated in maintaining genomic integrity during DNA replication and after meiotic recombination. The protein encoded by this gene functions as a heterodimer with other family members. Somatic mutations in this gene frequently occur in tumors exhibiting microsatellite instability, and germline mutations have been linked to hereditary nonpolyposis colorectal cancer type 7 (HNPCC7). Several alternatively spliced transcript variants have been identified, but the full-length nature of only two transcript variants has been determined. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (2), also known as delta7, lacks an alternate in-frame exon, compared to variant 1, resulting in a shorter protein (isoform 2), compared to isoform 1.