

Product datasheet for **MC221356**

MIh1 (NM_026810) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MIh1 (NM_026810) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	MIh1
Synonyms:	1110035C23Rik; AI317206; AI325952; AI561766
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC221356 representing NM_026810
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGTTTGTAGCAGGAGTTATTTCGGCGTCTGGACGAGACGGTAGTGAACCGCATAGCGCGGGGGAAG
 TCATTCAGCGGCCGCCAATGCTATCAAAGAGATGATAGAAAACCTGTTTAGATGCAAAATCTACAAATAT
 TCAAGTGGTTGTTAAGGAAGGTGGCCTGAAGCTAATTCAGATCCAAGACAATGGCACTGGAAATCAGGAAG
 GAAGATCTGGATATTGTGTGTGAGAGGTTCACTACGAGTAAACTGCAGACTTTTGAGGATTTAGCCAGTA
 TTTCTACCTATGGCTTTTCGTGGTGGGCAATGGCAAGCATAAGCCATGTGGCCCATGTCATTACAAC
 CAAAACAGCTGATGGAAATGTGCGTACAGAGCAAGTTACTCAGATGGAAAGCTGCAAGCCCTCTCTAAA
 CCCTGTGCAGGCAACCAGGGCACCTGATCACGGTGAAGACCTTTTTTACAACATAATCACAAGGAGGA
 AAGCTTTAAAAATCCAAGTGAAGAGTACGAAAAATTTTGAAGTTGTTGGCAGGTATTCAATACACAA
 TTCAGGCATTAGTTTCTCAGTTAAAAACAAGGTGAGACAGTATCTGATGTCAGAACACTGCCCAATGCC
 ACAACCGTGGACAACATTCGCTCCATCTTTGAAATGCGGTTAGTCGAGAAGTATAGAAGTTGGGTGTG
 AGGATAAAACCTAGCTTTCAAATGAATGGCTATATATCGAATGCAAATATTCACTGAAAGAGTGCAT
 TTTCTACTCTTCATCAACCACCGTCTGGTAGAATCAGCTGCCTTGAGAAAAGCCATTGAAACTGTATAT
 GCAGCATACTTGCCCAAAAACACACACCATTCTGTACCTCAGTTTGGAAATCAGCCCTCAGAAGCTGG
 ACGTCAATGTACACCCCAAGCAGCAAGTTCACCTTCTGCACGAGGAGAGCATTCTGCAGCGTGTGCA
 GCAGCACATTGAGAGCAAGCTGCTGGGCTCCAATTCCTCCAGGATGTATTTACCCAGACCTTGCTTCCA
 GGACTTGCTGGGCTTCTGGGGAGGCAGCTAGACCCACGACAGGGGTGGCTTCTCATCCACTATGGAA
 GTGGCGACAAGGTCTACGCTTACCAGATGGTCCGTACGGACTCCCGGGAGCAGAAGCTTGACGCCTTCT
 GCAGCCTGTAAGCAGCCTTGGGCCAGCCAGCCAGGACCTGCCCTGTCCGAGGGGCCAGGACGGAG
 GGATCTCTGAAAGGGCCACGCGGGAGGACGAGGAGATGCTTGCTCTCCAGCCCCGCTGAAGCAGCTG
 CTGAGAGTGAGAACTTGAGAGGGAATCACTAATGGAGACTTCAGACGCAGCCAGAAGCGGCACCCAC
 TTCCAGTCCAGGAAGCTCCAGAAAGAGACATCGGGAGGACTCTGATGTGGAAATGGTGGAAAATGCTTCC
 GGAAGGAAATGACAGCTGCTTGTACCCAGGAGGAGGATCATTAACTCACCAGCGTCTTGAGTCTCC
 AGGAAGAGATTAGTGAGCGGTGCCATGAGACTCTCCGGGAGATGCTCCGTAACCATTCCTTTGTGGGCTG
 TGTGAATCCTCAGTGGGCTTGGCACAGCACCAGACCAAGCTCTACCTCCTCAACACTACCAAGCTCAGT
 GAAGAGCTGTTCTACCAGATACTATTTATGATTTTGCCAACTTTGGTGTCTGAGGTTATCGGAACCAG
 CGCCACTCTTCGACCTGGCCATGCTGGCCTTAGACAGTCCTGAAAGTGGCTGGACAGAGGACGACGCCCC
 GAAGGAAGGGCTTGCAGAGTACATTGTTGAGTTTCTGAAGAAGAAAGCGGAGATGCTTGCAGACTATTTT
 TCTGTGGAGATCGATGAGGAAGGGAACCTGATTGGATTACCTCTTCTGATTGACAGCTATGTGCCACCTT
 TGGAGGGACTGCCTATCTTCATTCTTCGACTGGCCACTGAGGTGAATTGGGATGAAGAAAAGGAGTGTTT
 TGAAAGTCTCAGTAAAGAATGTGCTATGTTTTACTCCATTCGGAAGCAGTATATACTGGAGGAGTCGACC
 CTCTCAGGCCAGCAGAGTGACATGCCTGGCTCCACGTCAAAGCCCTGGAAGTGGACTGTGGAGCACATTA
 TCTATAAAGCCTCCGCTCACACCTCTACCTCCGAAGCATTTCACAGAAGATGGCAATGTCTCGACGT
 TGCCAACCTGCCAGATCTATACAAGTCTTTGAGCGGTGT**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_026810
Insert Size: 2283 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:	<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:	NM_026810.2 , NP_081086.2
RefSeq Size:	2598 bp
RefSeq ORF:	2283 bp
Locus ID:	17350
UniProt ID:	Q9JK91
Cytogenetics:	9 60.92 cM
Gene Summary:	<p>Heterodimerizes with Pms2 to form MutL alpha, a component of the post-replicative DNA mismatch repair system (MMR). DNA repair is initiated by MutS alpha (Msh2-Msh6) or MutS beta (MSH2-MSH3) binding to a dsDNA mismatch, then MutL alpha is recruited to the heteroduplex. Assembly of the MutL-MutS-heteroduplex ternary complex in presence of RFC and PCNA is sufficient to activate endonuclease activity of Pms2. It introduces single-strand breaks near the mismatch and thus generates new entry points for the exonuclease EXO1 to degrade the strand containing the mismatch. DNA methylation would prevent cleavage and therefore assure that only the newly mutated DNA strand is going to be corrected. MutL alpha (Mlh1-Pms2) interacts physically with the clamp loader subunits of DNA polymerase III, suggesting that it may play a role to recruit the DNA polymerase III to the site of the MMR. Also implicated in DNA damage signaling, a process which induces cell cycle arrest and can lead to apoptosis in case of major DNA damages. Heterodimerizes with Mlh3 to form MutL gamma which plays a role in meiosis (By similarity).[UniProtKB/Swiss-Prot Function]</p> <p>Transcript Variant: This variant (1) encodes the longer isoform (1).</p>