

Product datasheet for RC401760

MSH2 (NM 000251) Human Mutant ORF Clone

Product data:

Product Type: Mutant ORF Clones

Product Name: MSH2 (NM_000251) Human Mutant ORF Clone

Mutation Description: Q288X

Affected Codon#: 288

Affected NT#: 862

Nucleotide Mutation: MSH2 Mutant (Q288X), Myc-DDK-tagged ORF clone of Homo sapiens mutS homolog 2, colon

cancer, nonpolyposis type 1 (E. coli) (MSH2) as transfection-ready DNA

Effect: Colorel ner, non-polyposis

Symbol: MSH2

Synonyms: COCA1; FCC1; hMSH2; HNPCC; HNPCC1; LCFS2; MMRCS2

E. coli Selection: Kanamycin (25 ug/mL)

Mammalian Cell Neomycin

Selection:

Vector: pCMV6-Entry (PS100001)

Tag: Myc-DDK
ACCN: NM 000251

ORF Size: 861 bp

Restriction Sites: Sgfl-Mlul

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MSH2 (NM_000251) Human Mutant ORF Clone - RC401760

ORF Nucleotide Sequence:

>RC401760 representing NM_000251
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

CAAAAGACATTTATCAGGACCTCAACCGGTTGTTGAAAGGCAAAAAGGGAGAGCAGATGAATAGTGCTGT ATTGCCAGAAATGGAGAATCAGGTTGCAGTTTCATCACTGTCTGCGGTAATCAAGTTTTTAGAACTCTTA

TCAGATGATTCCAACTTTGGA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTCGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC401760 representing NM_000251 Red=Cloning site Green=Tags(s)

MAVQPKETLQLESAAEVGFVRFFQGMPEKPTTTVRLFDRGDFYTAHGEDALLAAREVFKTQGVIKYMGPA GAKNLQSVVLSKMNFESFVKDLLLVRQYRVEVYKNRAGNKASKENDWYLAYKASPGNLSQFEDILFGNND MSASIGVVGVKMSAVDGQRQVGVGYVDSIQRKLGLCEFPDNDQFSNLEALLIQIGPKECVLPGGETAGDM GKLRQIIQRGGILITERKKADFSTKDIYQDLNRLLKGKKGEQMNSAVLPEMENQVAVSSLSAVIKFLELL SDDSNFG

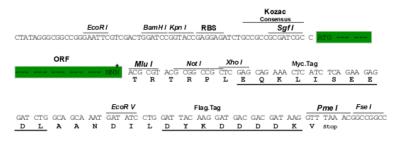
SGPTRTRRLEQKLISEEDLAANDILDYKDDDDK**V**

Restriction Sites: Sgfl-Mlul



Cloning Scheme:





OTI Disclaimer:

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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).

RefSeq: NP 000242

RefSeq Size: 861 bp RefSeq ORF: 2805 bp Locus ID: 4436

Cytogenetics: 2p21-p16.3

Domains: MutS_V, MutS_I, MutS_III, MutS_II, MutS_IV **Protein Families:** Druggable Genome, Stem cell - Pluripotency

Protein Pathways: Colorectal cancer, Mismatch repair, Pathways in cancer



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MW: 31.6 kDa

Gene Summary: This locus is frequently mutated in hereditary nonpolyposis colon cancer (HNPCC). When

cloned, it was discovered to be a human homolog of the E. coli mismatch repair gene mutS, consistent with the characteristic alterations in microsatellite sequences (RER+ phenotype) found in HNPCC. Two transcript variants encoding different isoforms have been found for this

gene. [provided by RefSeq, Apr 2012]