

## Product datasheet for **SC337790**

### **MMS19 (NM\_001289405) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MMS19 (NM_001289405) Human Untagged Clone
Tag:	Tag Free
Symbol:	MMS19
Synonyms:	CIAO4; hMMS19; MET18; MMS19L
Vector:	<u>pCMV6 series</u>



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_001289405, the custom clone sequence may differ by one or more nucleotides

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ATGGCCGCTGCCGCGCTGTGGAGGCGGCGCCCTATGGGTGCCCTATGGGGCCTCGTGCACGACTTCG
TCGTGGGTGAGCAAGAGGGCCCCGCTGACCAGGTGGCTGCAGATGTGAAATCTGGCAACTATACAGTGTT
ACAAGTTGTGGAAGCCCTTGGGTCCTCTCTAGAGAATCCAGAACCCCGAACTCGGGCAGCAGCAATCCAG
CTTTTGTACAGGTGCTACTCCACTGTCACACCTTGCTCCTGGAGAAGGAAGTGGTACACCTGATACTGT
TCTATGAGAACC GGCTGAAGGACCATCATCTTGTGATCCCATCTGTCCTGCAGGGTTTGAAGGCACTTAG
CCTGTGTGTGGCCCTGCCCCAGGGCTGGCTGTTTCTGTGCTTAAAGCCATCTTCCAGGAAGTGCATGTA
CAGTCCCTGCCACAGGTGGACCGACACACAGTCTACAATATCATCACCAATTTTATGCGAACCCGGGAAG
AAGAGCTAAAGAGCCTAGGAGCTGACTTACCTTTGGTTCATCCAGGTGATGGATGGGAAAAGGATCC
CCGTAATCTTCTGGTGGCCTTCCGCATCGTCCATGACCTCATCTCCAGGGACTATAGCCTGGGACCCCTT
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ATGGTATCCAGAGAGAAGACCTCATCTGAGTCTTCGCGCTGTGCTGGCTTCTACACCAGATTTGCTGA
GTTTCTGCTGCCCTGTTGATTGAGAAAGTGGATTCTGAGGTTCTGAGTGCCAAGTTGGATTCTCTACAG
ACTCTGAATGCTTGTGTGTGTATGGACAGAAGGAAGTGAAGGACTTCTCCCCAGCCTTTGGGCTT
CTATCCGACAGAGAGGTGTTCCAGACGGCAAGTGAGCGGGTGGAGGCAGAGGGCCTGGCGGCCCTCCACTC
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TGTTGCAGGCAGTGCAGGTGCATCTGCCGGGCTGTGACTCTGTCACCAGCAATGACTGCCTTACT
GTTGGAACAGTTCCACAAGCACAGTCAAGCAGCCAGCGGGACAATCCTTGAATGCTCCTGGGTTTC
TTGAAGCTGCAGCAGAAAATGGAGCTATGAAGACAAGATCAAAGGCCCTCTGAATGGCTTCAAGACCAGC
GTGCTCACTGGTATTCATGGCTCTAACAGACCCAGCACCCAGCTTTCAGCTTGTGGCATCCGTACACT
GACAGTCTTGGGTGCCAGCCAGATCTCCTATCTTATGAGGACTTGGAGCTGGCAGTGGGTACCTGTAC
AGACTGAGCTTCTGAAGGAGGATCCCAGAGTTGCAGGGTGGCAGCACTGGAAGCATCAGGAACCTGG
CTGCTCTCTACCCTGTGGCCTTCCAGCAGCCACCTCGTACCCAAGCTCGCTGAGGAGCTGCGTGTAGGGGA
GTCAAATTTGACTAACGGAGATGAGCCACCCAATGCTCCCGCATCTGTGCTGTCTGCAAGCCTTGTCAG
GCTGTATCAACACATCCCAGCATCGTCAAGGAGACTGCCTCTGCTGCTGCAGCATCTCTGGCAAGTGA
ACAGAGGGAATATGGTTGCACAATCCAGTGACGTTATTGCTGTCTGTGAGCCTCAGACAGATGGCAGA
AAAATGTCAGCAGGACCCTGAGAGTTGCTGGTATTTCCACCAGACAGCTATACCTTGCTGCTTGCCTTG
GCTGTGACAGGCCCTATGCCAGAGAAGGAGCCCTCAGTTCTGAGAAAAGTACTATTGGAGGATGAGGTGT
TGGCTGCCATGGTGTCTGTCAATTGGCACTGCTACAACCCACCTGAGCCCTGAGTTAGCTGCCAGAGTGT
GACACACATTGTGCCCTCTTCTTGGATGGCAACGTGTCTTTCTGCCTGAAAACAGCTTCCCGAGCAGA
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CCCTGCCTCGAAATGTGGAAATCCCTCAGCTGAACCAACTCATGCGGGAGCTTTTGGAACTGAGCTGCTG
CCACAGCTGCCCTTTTCTTCCACCGTCTGCTGCCAAGTCTTGGCAGGACTCCTCAACAAGCACCCTGCA
GGGCAGCAGCTGGATGAATTCCTACAGTAGCTGTGGACAAAAGTGGAGGCTGGCCTGGGCTCTGGGCCCT
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TCCGCCAGCGGTTCTTACAGATAATGTGCTGCTTGGTCCAGGGCTTCCATGCTGCTCCCAAGATGT
GAAGCCAAACTACTTGAAGGGTCTTTCTCATGTACTTAAACAGGCTGCCCAAGCCTGTACTCTTGCCAGAG
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TCAGCTGCCTTACGCTTCTTACTGGAAGCACCCCAAGTCATGAGTCTTACGTTGACACCCTCGTCAC
CAAGTTTCTGAACCTCAGCTCTAGCCCTTCCATGGCTGTCCGGATCGCCGCACTGCAGTGCATGCATGCT
CTCACTGCCTGCCACCCCTGTGCTGCTGCCGTACAACACAGGTTGATTCGGGCTTAGCCAAACCC
TGGATGACAAGAAGAGACTGGTGGCAAGGAAGCAGTGTGAGCCAGAGGGGAGTGGTTTCTGTTGGGGAG
CCCTGGCAGCTGA
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<b>Restriction Sites:</b>	Sgfl-Mlul
<b>ACCN:</b>	NM_001289405
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001289405.1</a></u> , <u><a href="#">NP_001276334.1</a></u>
<b>RefSeq Size:</b>	3585 bp
<b>RefSeq ORF:</b>	3093 bp
<b>Locus ID:</b>	64210
<b>UniProt ID:</b>	<u><a href="#">Q96T76</a></u>
<b>Cytogenetics:</b>	10q24.1
<b>Protein Families:</b>	Druggable Genome, Transcription Factors

**Gene Summary:**

Key component of the cytosolic iron-sulfur protein assembly (CIA) complex, a multiprotein complex that mediates the incorporation of iron-sulfur cluster into apoproteins specifically involved in DNA metabolism and genomic integrity. In the CIA complex, MMS19 acts as an adapter between early-acting CIA components and a subset of cellular target iron-sulfur proteins such as ERCC2/XPD, FANCI and RTEL1, thereby playing a key role in nucleotide excision repair (NER), homologous recombination-mediated double-strand break DNA repair, DNA replication and RNA polymerase II (POL II) transcription (PubMed:22678362, PubMed:22678361, PubMed:29225034, PubMed:23585563). As part of the mitotic spindle-associated MMXD complex, plays a role in chromosome segregation, probably by facilitating iron-sulfur cluster assembly into ERCC2/XPD (PubMed:20797633). Indirectly acts as a transcriptional coactivator of estrogen receptor (ER), via its role in iron-sulfur insertion into some component of the TFIID-machinery (PubMed:11279242).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (4) differs in the 5' UTR, compared to variant 1. Variants 1 and 4 encode the same protein (isoform 1). Sequence Note: A downstream start codon is selected for this RefSeq based on better conservation with homologous proteins. The use of an alternative upstream start codon, which is present in some species, including human, chimp and macaque (with a subsequent CDS frameshift in the latter species), would increase the protein length from 1030 aa to 1051 aa. The shorter protein is referred to in the literature, including PMIDs 11071939, 11279242 and 11328871.