

## Product datasheet for **SC322190**

### MGMT (NM\_002412) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MGMT (NM_002412) Human Untagged Clone
Tag:	Tag Free
Symbol:	MGMT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for SC322190 GACGCCCGCAGGTCTCGCGGTGCGCACCGTTTGGCGACTTGGTACTTGGAAAAATGGACA AGGATTGTGAAATGAAACGCACCACACTGGACAGCCCTTTGGGGAAGCTGGAGCTGTCTG GTTGTGAGCAGGGTCTGCACGAAATAAAGCTCCTGGGCAAGGGGACGTCTGCAGCTGATG CCGTGGAGGTCCCAGCCCCGCTGCGGTTCTCGGAGGTCCGGAGCCCCTGATGCAGTGCA CAGCCTGGCTGAATGCCTATTTCCACCAGCCCAGGCTATCGAAGAGTTCCCCGTGCCGG CTCTTCACCATCCCCTTTCCAGCAAGAGTCGTTACCAGACAGGTGTTATGGAAGCTGC TGAAGTTGTGAAATTCGGAGAAGTGATTTCTTACCAGCAATTAGCAGCCCTGGCAGGCA ACCCCAAAGCCGCGCAGCAGTGGGAGGAGCAATGAGAGGCAATCCTGTCCCCATCCTCA TCCCGTGCCACAGAGTGGTCTGCAGCAGCGGAGCCGTGGGCAACTACTCCGGAGGACTGG CCGTGAAGGAATGGCTTCTGGCCATGAAGGCCACCGTTGGGGAAGCCAGGCTTGGGAG GGAGCTCAGGTCTGGCAGGGCCCTGGCTCAAGGGAGCGGAGCTACCTCGGGCTCCCCGC CTGCTGGCCGAAACTGAGTATGTGCAGTAGGATGGATGTTTGGAGCGACACACAGTGTA CACTGCATCGGATGCGGGGCGTGGAGGCCACCGCTGATTAAGGAAGTGGCAGTGTCTCTG GGAAAAAAAAAAAAAAAA
Restriction Sites:	Please inquire
ACCN:	NM_002412



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**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](mailto: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 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:**

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\\_002412.2](#), [NP\\_002403.1](#)

**RefSeq Size:** 1265 bp

**RefSeq ORF:** 624 bp

**Locus ID:** 4255

**UniProt ID:** [P16455](#)

**Cytogenetics:** 10q26.3

**Domains:** Methyltransf\_1

**Protein Families:** Druggable Genome

**Gene Summary:**

Alkylating agents are potent carcinogens that can result in cell death, mutation and cancer. The protein encoded by this gene is a DNA repair protein that is involved in cellular defense against mutagenesis and toxicity from alkylating agents. The protein catalyzes transfer of methyl groups from O(6)-alkylguanine and other methylated moieties of the DNA to its own molecule, which repairs the toxic lesions. Methylation of the genes promoter has been associated with several cancer types, including colorectal cancer, lung cancer, lymphoma and glioblastoma. [provided by RefSeq, Sep 2015]