

Product datasheet for **RC229131**

MGMT (NM_002412) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MGMT (NM_002412) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MGMT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC229131 representing NM_002412 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTGGGACAGCCCGCCCTAGAACGCTTTGCGTCCCAGCGCCGCAGGTCTCGCGGTGCGCACCG
TTTGCGACTTGGTACTTGGAAAAATGGACAAGGATTGTGAAATGAAACGCACCACACTGGACAGCCCTTT
GGGAAGCTGGAGCTGTCTGGTTGTGAGCAGGGTCTGCACGAAATAAAGCTCCTGGCAAGGGGACGTCT
GCAGCTGATGCCGTGGAGTCCCAGCCCCGCTGCGGTTCTCGGAGTCCGGAGCCCTGATGCAGTGCA
CAGCCTGGCTGAATGCCTATTTCCACCAGCCCGAGGCTATCGAAGAGTTCCTCCGTCGCCGCTCTCACCA
TCCCGTTTTCCAGCAAGAGTCGTTCAACCAGACAGGTGTTATGGAAGCTGCTGAAGTTGTGAAATTCGGA
GAAGTGATTTCTTACCAGCAATTAGCAGCCCTGGCAGGCAACCCCAAAGCCGCGGAGCAGTGGGAGGAG
CAATGAGAGGCAATCCTGTCCCCATCCTCATCCCGTGCCACAGAGTGGTCTGCAGCAGCGGAGCCGTGGG
CAACTACTCCGGAGGACTGGCCGTGAAGGAATGGCTTCTGGCCATGAAGGCCACCGGTTGGGAAGCCA
GGCTTGGGAGGGAGCTCAGGTCTGGCAGGGCCTGGCTCAAGGGAGCGGGAGCTACCTCGGGCTCCCCG
CTGCTGGCCGAAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



[View online »](#)

Protein Sequence: >RC229131 representing NM_002412
 Red=Cloning site Green=Tags(s)

MLGQPAPLERFASRRPQVLAVRTVCDLVLGKMDKDCEMKRTTLDSPKLEL SGCEQGLHEIKLLGKGT
 AADAVEVPAPAAVLGGPEPLMQCTAWLNAYFHQPEAIEEFVVPALHHPVFQQESFTRQVLWKLKVVKFG
 EVISYQQLAALAGNPKAARAVGGAMRGNPVPILIPCHRVCSSGAVGNYSGLAVKEWLLAHEGHRLLGK
 GLGGSSGLAGAWLKGAGATSGSPAPGRN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4512_h01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002412

ORF Size: 714 bp

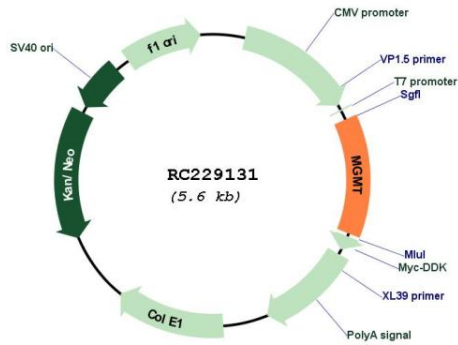
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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](#)

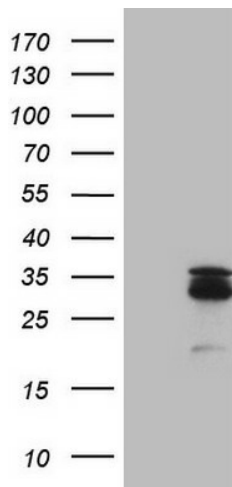
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).
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_002412.4
RefSeq ORF:	624 bp
Locus ID:	4255
UniProt ID:	P16455
Cytogenetics:	10q26.3
Domains:	Methyltransf_1
Protein Families:	Druggable Genome
MW:	24.9 kDa
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]

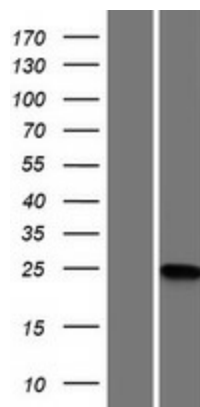
Product images:



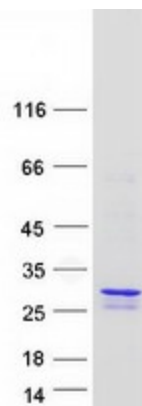
Circular map for RC229131



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MGMT (Cat# RC229131, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MGMT (Cat# [TA809131])(1:2000). Positive lysates [LY432155] (100ug) and [LC432155] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY432155]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC229131 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MGMT protein (Cat# [TP329131]). The protein was produced from HEK293T cells transfected with MGMT cDNA clone (Cat# RC229131) using MegaTran 2.0 (Cat# [TT210002]).