



## Product Datasheet

<b>Product Name</b>	O-6-Methylguanine-DNA Methyltransferase Human Recombinant
<b>Cata No</b>	CB501398
<b>Source</b>	<i>Escherichia Coli.</i>
<b>Synonyms</b>	Methylated-DNA--protein-cysteine methyltransferase, 6-O-methylguanine-DNA methyltransferase, O-6-methylguanine-DNA-alkyltransferase, MGMT.

### Description

MGMT is an enzyme that repairs O-6-methylguanine, a mutagenic DNA base damaged by endogenous and environmental alkylating agents and takes part in the cellular defense against the biological effects of O-6-methylguanine in DNA. MGMT repairs alkylated guanine in DNA by stoichiometrically transferring the alkyl group at the O-6 position to a cysteine residue in the enzyme. abnormal MGMT expression correlates with the prognosis in human solid cancers. MGMT decrease of expression is correlated with methylation. The human MGMT is a negative regulator of estrogen receptor-mediated transcription upon alkylation DNA damage. MGMT promoter hypermethylation plays an important role in the early steps of colorectal carcinogenesis. Abnormal promoter hypermethylation of MGMT gene is associated with oral squamous cell carcinomas. MGMT Human Recombinant fused to 20 amino acid His Tag at N-terminal produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 227 amino acids (1-207) and having a molecular mass of 23.8 kDa. The MGMT is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile Filtered clear colorless solution.

### Purity

Greater than 95.0% as determined by SDS-PAGE.

### Formulation

The MGMT solution contains 20mM Tris-HCl pH-7.5, 1mM DTT and 10% glycerol.

### Stability

MGMT Recombinant Human although stable at 4°C for 30 days, should be stored desiccated below -20°C for periods greater than 30 days.

**Please avoid freeze-thaw cycles.**

### Sequence

**MGSSHHHHH SSGLVPRGSH** MDKDCMKRT  
TLDSPLGKLE LSGCEQGLHE IKLLGKGTSA  
ADAVEVPAPA AVLGGPEPLM QCTAWLNAYF  
HQPEAIEEFP VPAFHHPVFQ QESFTRQVLW  
KLLKVVKFGE VISYQQLAAL AGNPKAARAV  
GGAMRGNPVP ILIPCHRVCV SSGAVGNYSG  
GLAVKEWLLA HEGHRLGKPG LGGSSLAGA  
WLKGAGATSG SPPAGRN