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**Product Data Sheet**


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Product Name: MGMT Human  
 Cat. No.: GP21923  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Methylated-DNA--protein-cysteine methyltransferase; 6-O-methylguanine-DNA methyltransferase; O-6-methylguanine-DNA-alkyltransferase; MGMT.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MDKDCMKRT TLDSPLGKLE LSGCEQGLHE IKLLGKGTSA ADAVEVPAPA AVLGGPEPLM QCTAWLNAYF HQPEAIEEFP VPAFHHPVFQ QESFTRQVLW KLLKVVKFGE VISYQQLAAL AGNPKAARAV GGAMRGNPVP ILIPCHRVC SSGAVGNYSG GLAVKEWLLA HEGHRLGKPG LGGSSGLAGA WLKGAGATSG SPPAGRN.		
Formulation	The MGMT solution contains 20mM Tris-HCl pH-7.5, 1mM DTT and 10% glycerol.		

**Introduction**

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.

**Stability**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer

**Caution: Product has not been fully validated for medical applications. For research use only.**

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periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

MGMT Human Recombinant fused to a 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.

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