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## Recombinant human MGMT protein

Catalog Number: MMT0901

## **PRODUCT INFORMATION**

## **Expression system**

E.coli

#### **Domain**

1-207aa

#### UniProt No.

P16455

#### **NCBI Accession No.**

NP 002403.3

#### **Alternative Names**

O-6-methylguanine-DNA methyltransferase, MGMT, EC 2.1.1.63, O-6-methylguanine-DNA-alkyltransferase, O-6-methylguanine-DNA methyltransferase 6 O methylguanine DNA methyltransferase, Agat, AGT, Al267024, MGC107020, Methylated DNA protein cysteine methyltransferase, Methylguanine DNA methyltransferase, O 6 methylguanine DNA alkyltransferase.

## **PRODUCT SPECIFICATION**

## **Molecular Weight**

23.8 kDa (227aa) confirmed by MALDI-TOF (Molecular weight on SDS-PAGE will appear higher)

### Concentration

0.5mg/ml (determined by Bradford assay)

### **Formulation**

Liquid in. 20mM Tris-HCl buffer (pH 7.5) containing 1mM DTT, 10% glycerol

## **Purity**

> 95% by SDS-PAGE

#### **Endotoxin level**

< 1 EU per 1ug of protein (determined by LAL method)

## Tag

His-Tag

#### **Application**

SDS-PAGE

## **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## **BACKGROUND**

#### **Description**

O-6-methylguanine-DNA methyltransferase (MGMT) is an enzyme that repairs O-6-methylguanine, a mutagenic



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DNA base damaged by endogenous and environmental alkylating agents and is involved 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. There are few reports that abnormal MGMT expression correlates with the prognosis in human solid cancers. Recombinant MGMT, fused to His-tag at N-terminus, was expressed in E. coli and was purified by conventional chromatography techniques.

## **Amino acid Sequence**

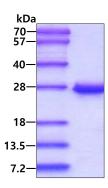
<MGSSHHHHHH SSGLVPRGSH> MDKDCEMKRT TLDSPLGKLE LSGCEQGLHE IKLLGKGTSA ADAVEVPAPA
AVLGGPEPLM QCTAWLNAYF HQPEAIEEFP VPAFHHPVFQ QESFTRQVLW KLLKVVKFGE VISYQQLAAL AGNPKAARAV
GGAMRGNPVP ILIPCHRVVC SSGAVGNYSG GLAVKEWLLA HEGHRLGKPG LGGSSGLAGA WLKGAGATSG SPPAGRN

#### **General References**

Matsukura S., et al. (2001) Annals of Surgical Oncology, 8(10):807--816 Esteller M., et al. (2002) J Natl Cancer Inst. 2, 26-32.

## DATA

### **SDS-PAGE**



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

