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, AI267024, 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

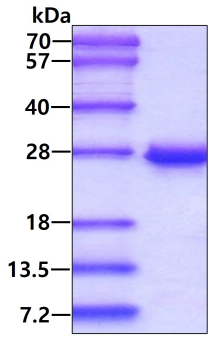
<MGSSHHHHHH SSGLVPRGSH> MDKDCEMKRT TLDSPLGKLE LSGCEQGLHE IKLLGKGTSA ADAVEVPAPA AVLGGPEPLM QCTAWLNAYF HQPEAIEEFP VPAFHHPVFQ QESFTRQVLW KLLKVVKFGE VISYQQLAAL AGNPKAARAV GGAMRGNPVP ILIPCHRVVC SSGAVGNYSG GLAVKEWLLA HEGHRLGKPG LGGSSGLAGA WLKGAGATSG SPPAGRN

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.