

MGMT Protein, Human (His)

Cat. No.:	HY-P70306
Synonyms:	rHuMethylated-DNA--protein-cysteine methyltransferase/MGMT, His; Methylated-DNA--protein-cysteine methyltransferase; 6-O-methylguanine-DNA-methyltransferase; O-6-methylguanine-DNA-alkyltransferase; MGMT
Species:	Human
Source:	E. coli
Accession:	P16455 (M1-N207)
Gene ID:	4255
Molecular Weight:	Approximately 27.0 kDa

PROPERTIES

AA Sequence	<pre> MDKDCMKRT TLDSP LGKLE LSGCEQGLHE IKLLGKGTSA ADAVEVPAPA AVLGGPEPLM QCTAWLNAYF HQPEAIEEFP VPALHHPVFQ QESFTRQVLW KLLKVVVKFGE VISYQQLAAL AGNPKAARAV GGAMRGNPVP ILIPCHRVC SSGAVGNYSG GLAVKEWLLA HEGHRLGKPG LGGSSGLAGA WLKGAGATSG SPPAGR N </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris-HCl, 1 mM DTT, 1 mM EDTA, 500 mM NaCl, 0.1% Triton X-100, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>The MGMT Protein plays a crucial role in the cellular defense against the biological effects of O6-methylguanine (O6-MeG) and O4-methylthymine (O4-MeT) in DNA. Operating through a suicide reaction, MGMT repairs the methylated nucleobases in DNA by stoichiometrically transferring the methyl group to a cysteine residue within the enzyme. However, this repair process results in the irreversible inactivation of the MGMT Protein. This unique mechanism underscores the sacrificial nature of MGMT's function, emphasizing its commitment to safeguarding cellular DNA integrity at the expense of its own</p>
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activity.

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

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