

Product Specification Sheet

---

**Human MGMT (O<sup>6</sup>-methylguanine-DNA methyltransferase) Protein**

<b>Cat #</b> MGMT15-R-5	Recombinant human MGMT Protein	<b>SIZE:</b> 5 ug
<b>Cat #</b> MGMT15-R-10	Recombinant human MGMT protein	<b>SIZE:</b> 10 ug

---

MGMT (O<sup>6</sup>-methylguanine-DNA methyltransferase). Many tumor promoting/causing agents (BCNU, CCNU, DTIC, procarbazine, temozolomide, etc) generate , lethal cross-links at the O<sup>6</sup>-alkylguanine position in DNA. MGMT removes alkyl adducts from the O<sup>6</sup>-position of guanine in DNA (prior to cross-link formation) to its cysteine residue, thereby irreversibly inactivating MGMT. Inactivated MGMT is rapidly degraded. Therefore, MGMT levels serves as an indicator of DNA damage. Tumors with high level of MGMT are likely to be drug resistant and low or no MGMT may make the tumor more responsive to chemotherapy. In normal cells, Abnormally low level of MGMT may make normal cells/tissue more susceptible to tumor promoting/alkylating agents.

**Source of Antigen and Antibodies**

Purified recombinant human MGMT protein (~25 kDa, 207 aa) expressed in *E. coli* and purified (90%).

**Human MGMT protein (Cat # MGMT15-R-5 or MGMT15-R-10)** is formulated in 20 mM Tris, pH 7.5, 1 mM DTT, 1 mM EDTA, 200 mM NaCl, and 50% glycerol (specific concentration is supplied on the vial).

Store at 0 or -20oC. Do not freeze.

**Specific activity**

Minimum 10,000 Units/mg protein. Unit is defined as the amount of protein that cleaves 50% of 0.5 pmole of dsDNA oligomer substrate (O6-methylguanine) in 10 min at 37oC.

**Storage**

**Short-term:** -20oC.

**Long-term:** at -20C.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** -frozen in dry ice.

**General References:**

1. Von Wronski et al (1994) Carcinogenesis 15, 577-582; Harris LC et al 1992) 52, 6404-6406;

**Citations of ADI's Antibodies for MGMT** (see web site for updated list)

WB=Western; IHC=Immunohisto.; IP=Immunoprecipit.

Shimada Y (2003) Intl J Radiat Biol 79, 423-430 (WB)

Biswas T (1999) Oncogene 18, 525 – 532 (WB)

\*This product is for In vitro research use only.

---

**Related material available from ADI**

Antibodies to MGMT, hNTH, DNASE, XRCC1, hOGG1, Anti-Rabbit IgG-HRP Conjugate and ECL Reagents

**Western Blot Recycling Kit (Strips blots in 5 minutes)** and re-use the same blot with multiple antibodies

MGMT15-R-5-10

71205A