

Human MGMT (O⁶-methylguanine-DNA methyltransferase) Antibodies

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| Cat # MGMT11-S | Rabbit Anti-human MGMT antiserum # 1 | SIZE: 100 ul |
| Cat # MGMT11-C | Recombinant human MGMT protein for WB | SIZE: 100 ul |

MGMT (O⁶-methylguanine-DNA methyltransferase). Many tumor promoting/causing agents (BCNU, CCNU, DTIC, procarbazine, temozolomide, etc) generate , lethal cross-links at the O⁶-alkylguanine position in DNA. MGMT removes alkyl adducts from the O⁶-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

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| Antigen | Purified recombinant human MGMT protein (~25 kDa, 207 aa) expressed in <i>E. coli</i> and purified |
| Ab Host/type | Rabbit, Polyclonal antiserum # MGMT11-S |
| 2-Ab | Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available). |
| -ve control IgG | Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control |

Purified recombinant human MGMT protein (~25 kDa, 207 aa) expressed in *E. coli* and purified. **Human MGMT protein for WB +ve control (Cat # MGMT11-C)** is formulated in SDS-PAGE sample buffer (reduced). This preparation is not biologically inactive. It is not suitable for ELISA or other applications where native protein is required. It is supplied in 100 ul/vial. For WB, heat once and load 10 ul/lane and visualize with appropriate antibodies. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Store frozen in suitable aliquots. Do not freeze, thaw, or heat repeatedly.

Form & Storage

Antiserum (unpurified, undiluted)

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| 100 ul/vial solution contains 0.05% sodium azide | 50 ul/vial lyophilized powder |
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Reconstitute powder 100 ul PBS

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

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

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting: An initial dilution of 1:500-2K is recommended for Western. Users must optimize antibody dilution depending upon the nature of samples and other technical conditions. The antibody has detects ~25 kDa in liver and many tumor cells (Molt-4, Raji, HeLa, HT-292, etc) (1).

ELISA (1:10-50K; using 50-100 ng antigen/well).

Histochemistry & Immunofluorescence: An initial dilution of 1:500 is recommended for IHC (frozen and formalin-fixed tissues may require boiling in 10 mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at room temp for 30 min) . Users must optimize antibody dilution depending upon the nature of samples and other technical conditions.

Specificity & Cross-reactivity

Anti-MGMT antiserum has poor crossreactivity with mouse/rat MGMT proteins in Western. Antibody crossreactivity in various species is not known.

General References: 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)

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

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