ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Life Technologies™ Your Molecular & Cell Technology Partner

Human MGMT (O^6-methylguanine-DNA methyltransferase) Antibodies

Cat # MGMT12-M	Mouse Monoclonal Anti-human MGMT IgG # 2	**SIZE**: 100 ug
Cat # MGMT12-C	Recombinant human MGMT protein for WB	**SIZE**: 100 ul

MGMT (O^6-methylguanine-DNA methyltransferase). Many tumor promoting/causing agents (BCNU, CCNU, DTIC, procarbazine, temozolomide, etc) generate , lethal cross-links at the O^6-alkylguanine position in DNA. MGMT removes alkyl adducts from the O^6-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

Antigen	Purified recombinant human MGMT protein (~25 kDa) expressed in E. coli (1)
Ab Host/type	Mouse, monoclonal IgG1, purified over Protein A/G-agarose (Cat # MGMT12-M) supplied in PBS+0.2% BSA+0.05% azide
2-Ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)

Purified recombinant human MGMT protein (~25 kDa, 207 aa) expressed in *E. coli and purified.* **Human MGMT protein for WB +ve control (Cat # MGMT12-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 hear repeatedly.

Form & Storage

Affinity pure IgG

100 ug/500ul

solution lyophilized powder

Buffer: 100 mM Tris, pH 7.5, 0.2% BSA 0.05% azide

Reconstitute powder PBS at 1 mg/ml

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 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 control peptide/well).

Histochemistry & Immunofluorescence: An initial dilution of 1:200 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.

The antibody works better in frozen formalin-fixed tissues. Formalin-fixed tissues require boiling tissue section in 10 mM citrate buffer, pH 6.0 for 10-20 min followed by cooling for 15-2- min. MGMT is cytoplasmic and nuclear.

Specificity & Cross-reactivity

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

1. **General References:** Von Wronski et al (1994) Carcinogenesis 15, 577-582; Harris LC et al 91992) 52, 6404-6406;

*This product is for In vitro research use only.

Related material available from ADI

Antibodies to MGMT, hNTH, DNASe, XRCC1, hOGG1

MGMT12-M-C 71205A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com

India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444

Email: customerservice@lifetechindia.com Website: www.lifetechindia.com