

## PRODUCT DATA SHEET

**Product:** Anti-MGMT mAb, clone MT3.1

**Cat. No.:** MC-380 (0.5 mL)

**Background:**

Cancer chemotherapeutic alkylating agents (e.g. BCNU) act by inducing formation of lethal cross-links at the O<sup>6</sup>-alkylguanine position in DNA. MGMT (O<sup>6</sup>-methylguanine-DNA methyltransferase) transfers alkyl adducts from the O<sup>6</sup>-position of guanine in DNA (prior to cross-link formation) to a cysteine residue in its own sequence, thereby restoring DNA to its intact state. This transfer inactivates the MGMT enzyme and is irreversible; hence the level of MGMT in a cell is directly proportional to the level of DNA-damage it can tolerate. In normal tissues, MGMT acts as a suppressor of mutation and carcinogenesis. Tumors with high levels of MGMT are likely to be drug-resistant.

**Molecular Weight of Antigen:**

25 kDa

**Species Reactivity:**

Human. Other species not known.

**Ig Isotype:**

Mouse IgG<sub>1</sub>

**Epitope:**

aa 8 - 221

**Positive Control:**

Raji cells, Colon carcinoma

**Cellular Localization:**

Nuclear and cytoplasmic

**Immunogen:**

Purified recombinant human MGMT protein.

**Format:**

0.5 mL of monoclonal antibody at 400 µg/mL (concentration can vary from lot to lot) in 10 mM PBS, pH 7.4, with protein stabilizer and 0.09% sodium azide. Purified from tissue culture supernatant by Protein G chromatography.

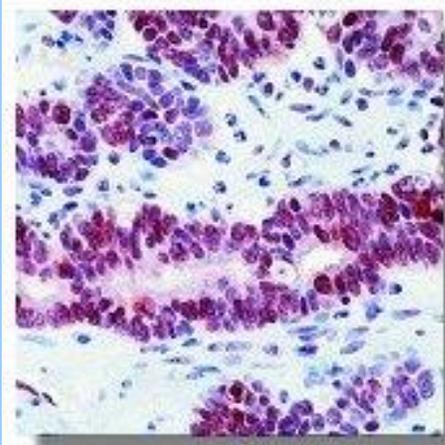
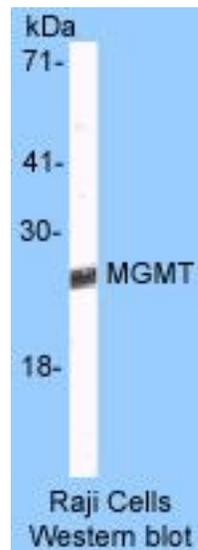
**Storage:**

Store at 4°C.

**Applications and Suggested Dilutions:**

- Flow cytometry (not verified)
- Immunohistochemistry: (formalin / paraffin) Use at a 1:10 - 1:20 dilution for 20 minutes at room temperature (RT). Staining of formalin-fixed tissues **REQUIRES** boiling tissue sections in 10 mM citrate buffer, pH 6.0, for 10 - 20 minutes followed by cooling at RT for 20 minutes. Note: IHC requires the use of a high-efficiency detection system.
- Western blot: Use at a 1:50 dilution for 2 hours at RT.

The optimal dilution for a specific application should be determined by the researcher.



Formalin-fixed, paraffin-embedded human colon carcinoma stained with MC-380.

**Limitations:**

For *in vitro* research use only. Not for use in diagnostics or in humans.

**Warranty:**

No warranties, expressed or implied, are made regarding the use of this product. KAMIYA BIOMEDICAL COMPANY is not liable for any damage, personal injury, or economic loss caused by this product.