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#58121

## MGMT (E6M7V) Rabbit mAb



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Entrez-Gene ID #4255  
UniProt ID #P16455

New 09/18

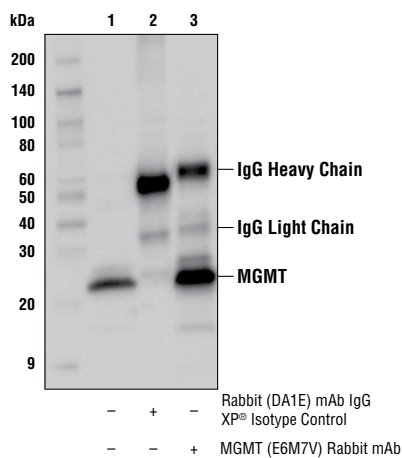
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| Applications<br>W, IP, IF-IC<br>Endogenous | Species Cross-Reactivity*<br>H, Mk | Molecular Wt.<br>21 kDa | Isotype<br>Rabbit IgG** |
|--|------------------------------------|-------------------------|-------------------------|
|--|------------------------------------|-------------------------|-------------------------|

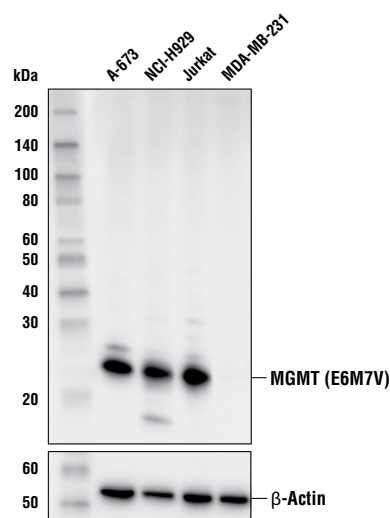
**Background:** MGMT (O-6-methylguanine-DNA methyltransferase) is a DNA repair enzyme that participates in a suicide reaction that specifically removes methyl or alkyl groups from the O(6) position of guanine, restoring guanine to its normal form without causing DNA breaks (1). MGMT protects cells from alkylating toxins, and is an important factor in drug resistance to alkylating therapeutic agents (2,3). It is ubiquitously expressed in normal human tissues (4) and is overexpressed in many types of human tumors, but epigenetically silenced in other tumors. MGMT silencing is a marker associated with poor prognosis, but is a good predictive marker for response to alkylating agent chemotherapy (5).

**Specificity/Sensitivity:** MGMT (E6M7V) Rabbit mAb recognizes endogenous levels of total MGMT protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly200 of human MGMT protein.



Immunoprecipitation of MGMT from VCAP cell extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is MGMT (E6M7V) Rabbit mAb. Western blot analysis was performed using MGMT (E6M7V) Rabbit mAb.



Western blot analysis of extracts from various cell lines using MGMT (E6M7V) Rabbit mAb (upper) and  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower). As expected, MDA-MB-231 cells do not express MGMT.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

#### Recommended Antibody Dilutions:

|                            |                   |
|----------------------------|-------------------|
| Western blotting           | 1:1000            |
| Immunoprecipitation        | 1:200             |
| Immunofluorescence (IF-IC) | 1:400             |
| Fixative:                  | 4% Formaldehyde   |
| Permeabilization:          | 0.3% Triton X-100 |

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).

#### Background References:

- (1) Pegg, A.E. (2000) *Mutat. Res.* 462, 83-100.
- (2) Bobola, M.S. et al. (2005) *Clin. Cancer Res.* 11, 2747-2755.
- (3) Pollack, I.F. et al. (2006) *J. Clin. Oncol.* 24, 3431-3437.
- (4) Gerson, S.L. et al. (1986) *Carcinogenesis* 7, 745-749.
- (5) Soejima, H. et al. (2005) *Biochem. Cell Biol.* 83, 429-437.

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**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.**

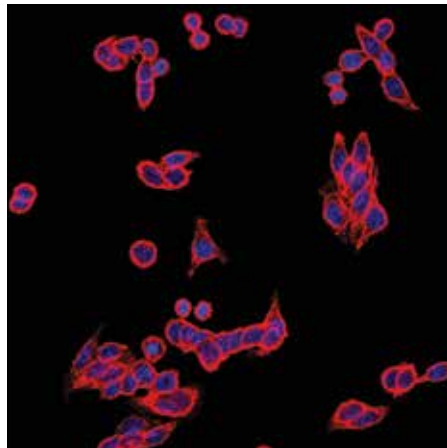
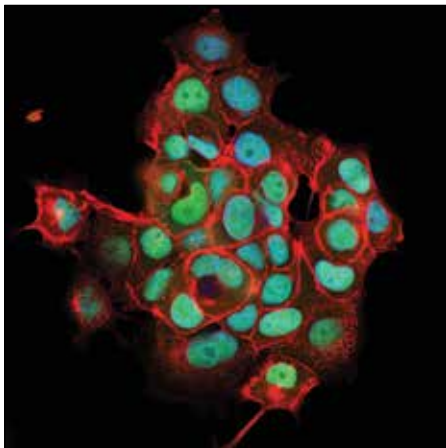
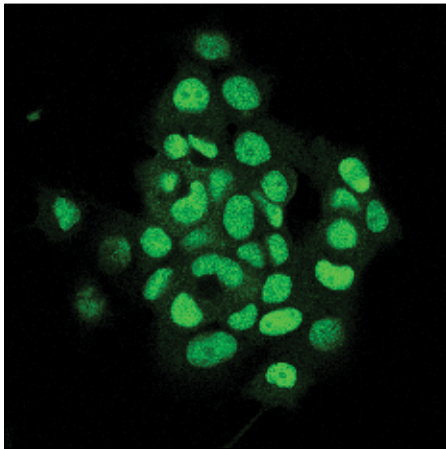
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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



*Confocal immunofluorescent analysis of MCF7 cells (left, positive) and SW620 cells (right, negative) using MGMT (E6M7V) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Samples were mounted in ProLong® Gold Antifade Reagent with DAPI #8961 (blue).*

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