

Store at  
-20°C

# Mitomycin C

#51854

5 mg



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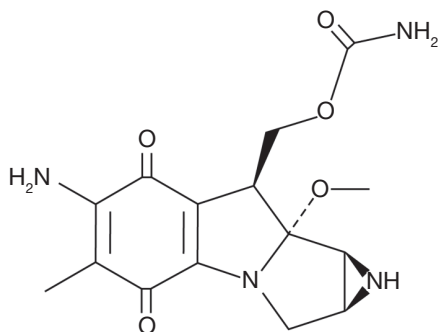
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New 04/20

## For Research Use Only. Not For Use In Diagnostic Procedures.

**Background:** Mitomycin C, also known as MMC, is an antitumor antibiotic isolated from *Streptomyces caespitosus* (1). When activated, this alkylating agent crosslinks double stranded DNA resulting in DNA damage (2). Mitomycin C has been found to have lethal effects on HeLa cells during the G<sub>1</sub> phase of the cell cycle (3). DNA damage caused by Mitomycin C can lead to increased levels of p53 that can result in cell cycle arrest or apoptosis (4).

**Molecular Formula:** C<sub>15</sub>H<sub>18</sub>N<sub>4</sub>O<sub>5</sub>

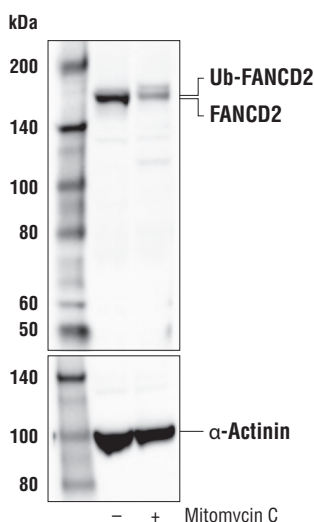


**Molecular Weight:** 334.3 g/mol

**Purity:** >98%

**CAS:** 50-07-7

**Solubility:** Soluble in DMSO at 15 mg/ml or water at 1 mg/ml with slight warming.



Western blot analysis of extracts from HeLa cells, untreated (-) or treated with Mitomycin C (2 µg/mL, 24 hr; +), using FANCD2 (D5L5X) Rabbit mAb #16323 (upper) or α-Actinin (D6F6) XP® Rabbit mAb #6487 (lower). DNA damage caused by Mitomycin C induces monoubiquitination of FANCD2, altering its electrophoretic mobility and increasing its apparent molecular weight (5).

**Storage:** Store lyophilized at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 1 month to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

**Directions for Use:** Mitomycin C is supplied as a lyophilized powder. For a 15 mM stock, reconstitute 5 mg of powder in 997 µl of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

### Background References:

- (1) HATA, T. and SUGAWARA, R. (1956) *J Antibiot (Tokyo)* 9, 147-51.
- (2) Tomasz, M. (1995) *Chem Biol* 2, 575-9.
- (3) Djordjevic, B. and Kim, J.H. (1968) *J Cell Biol* 38, 477-82.
- (4) Tishler, R.B. et al. (1993) *Cancer Res* 53, 2212-6.
- (5) Garcia-Higuera, I. et al. (2001) *Mol Cell* 7, 249-62.

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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.