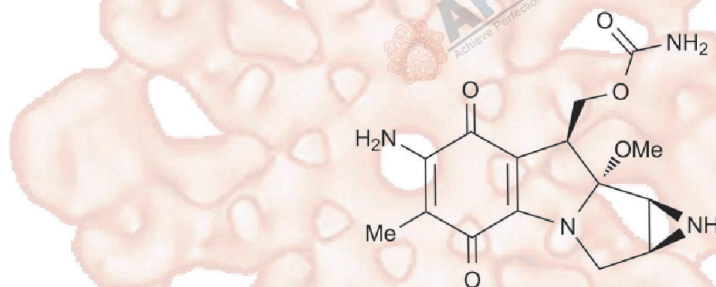


Product Data Sheet

Mitomycin C

| | |
|------------------|---|
| Cat. No.: | A4452 |
| CAS No.: | 50-07-7 |
| Formula: | C ₁₅ H ₁₈ N ₄ O ₅ |
| M.Wt: | 334.33 |
| Synonyms: | Ametycine |
| Target: | Apoptosis |
| Pathway: | Apoptosis Inducers |
| Storage: | Store at -20°C |



Solvent & Solubility

insoluble in H₂O; insoluble in EtOH; ≥16.7 mg/mL in DMSO

| In Vitro | Preparing Stock Solutions | Mass | | | |
|----------|---------------------------|----------------------|-----------|------------|------------|
| | | Solvent | 1mg | 5mg | 10mg |
| | | Concentration | | | |
| | | 1 mM | 2.9911 mL | 14.9553 mL | 29.9106 mL |
| | | 5 mM | 0.5982 mL | 2.9911 mL | 5.9821 mL |
| | | 10 mM | 0.2991 mL | 1.4955 mL | 2.9911 mL |

Please refer to the solubility information to select the appropriate solvent

Biological Activity

Shortsummary

Inhibits DNA synthesis, antibiotic and antitumor agent

IC₅₀ & Target

Cell Viability Assay

In Vitro

Cell Line: Colon adenocarcinoma HCT116, HCT116 (p53-/-) colon cancer, HT-29 human colon cancer cells, human bladder cancer cell line SW780

Preparation method: The solubility of this compound in DMSO is >16.7mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

| | | |
|---------|--------------------------|---|
| | Reacting conditions: | 1 μ M, 5 μ M, 10 μ M, 12 h or 24 h |
| | Applications: | MMC substantially enhanced the effect of TRAIL on suppression of the HCT116 (p53 ^{-/-}) cell proliferation. MMC enhanced TRAIL-induced apoptosis in TRAIL-resistant HT-29 cells. Pretreatment with MMC enhanced the sensitivity to lexatumumab and mapatumumab in HCT116 (p53 ^{-/-}) cells and HT-29 cells. MMC sensitized colon cancer cells to TRAIL-induced apoptosis through downregulation of anti-apoptotic proteins, and upregulation of cell survival proteins and TRAIL death receptors. |
| In Vivo | Animal experiment | |
| | Animal models: | Mice bearing xenografted HCT116 (p53 ^{-/-}) colon tumors and HT-29 colon tumors |
| | Dosage form: | Intraperitoneal injection, 1 mg/kg, |
| | Applications: | Animals were treated with MMC (1 mg/kg) and intravenous dose of TRAIL (100 μ g) every other day in combination therapy regimen for 10 consecutive cycles. The combination therapy significantly suppressed tumor growth with no effects on the weight. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

Product Citations

1. Liu TP, Hsieh YY, et al. "Systematic polypharmacology and drug repurposing via an integrated L1000-based Connectivity Map database mining." R Soc Open Sci. 2018 Nov 28;5(11):181321.PMID:30564416
2. Deng Y, Li F, et al. "Triptolide sensitizes breast cancer cells to Doxorubicin through the DNA damage response inhibition." Mol Carcinog. 2018 Jun;57(6):807-814.PMID:29500880
3. Meng L, Wang X, et al. "BAF53a is a potential prognostic biomarker and promotes invasion and epithelial-mesenchymal transition of glioma cells." Oncol Rep. 2017 Dec;38(6):3327-3334.PMID:290395840

See more customer validations on www.apexbt.com.

References

- [1]. Hairong Cheng, Bo Hong, Lanlan Zhou, Joshua E. Allen, Guihua Tai, Robin Humphreys, David T. Dicker, Yingqiu Y. Liu & Wafik S. El-Deiry. Mitomycin C potentiates TRAIL-induced apoptosis through p53-independent upregulation of death receptors. Cell Cycle (2012) 11(17):3312-3323

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.



Specific storage and handling information for each product is indicated on the product datasheet. Most APEX^xBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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