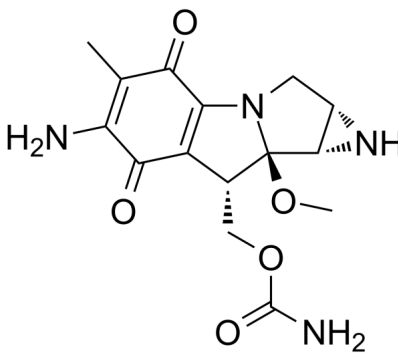


Certificate of Analysis

Catalog Number	BP22527
Product Name	Mitomycin C

Physical and Chemical Properties

CAS No.	50-07-7
Chemical Formula	C ₁₅ H ₁₈ N ₄ O ₅
Molecular Weight	334.33
Solubility	DMSO: 50 mg/mL (149.55 mM, Need ultrasonic) H ₂ O: < 0.1 mg/mL
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Product Information

Description	Mitomycin C (Ametycine) is a DNA cross-linking agent and induces DNA damaging. Mitomycin C is an antitumor agent and antibiotic that shows extraordinary ability to inhibit DNA synthesis. Mitomycin C is an ADC Cytotoxin and induces apoptosis.
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Targets&IC50	Traditional Cytotoxic Agents:
In vitro	<p>The HCT116 (p53^{-/-}) cells are minimally sensitive to either Mitomycin C (Ametycine) or TRAIL alone. However, surprisingly, combination treatment with MMC and TRAIL decreases cell viability significantly. Although Mitomycin C and TRAIL alone are moderately effective, Mitomycin C substantially enhances the effect of TRAIL on suppression of the cell proliferation. Mitomycin C and TRAIL treatment alone induces 9.5% and 35.0% apoptosis, respectively. However, combination treatment with Mitomycin C and TRAIL enhances apoptosis to 66.6%. Mitomycin C is a cytotoxic chemotherapeutic agent that causes DNA damage in the form of DNA cross-links as well as a variety of DNA monoadducts and is known to induce p53.</p>
In vivo	<p>Mice bearing xenografted HCT116 (p53^{-/-}) colon tumors and HT-29 colon tumors are treated with Mitomycin C (Ametycine; i.p., 1 mg/kg) and TRAIL (i.v., 100 µg) every other day. Animals are treated with 10 consecutive cycles of the combination therapy regimen. The combination therapy suppresses tumor growth significantly and does not impact the weight of the mice, indicating that the therapeutic combination of Mitomycin C and TRAIL is well-tolerated and has anti-tumor activity in vivo. Intravesical Mitomycin C instillations has an effect on body weight. After 3 consecutive weekly instillations of 1 mg/mL Mitomycin C there is almost no weight gain, whereas rats in the other 3 groups has a statistically significant weight gain compared with MMC treated rats.</p>

Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	<p>Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.</p>

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