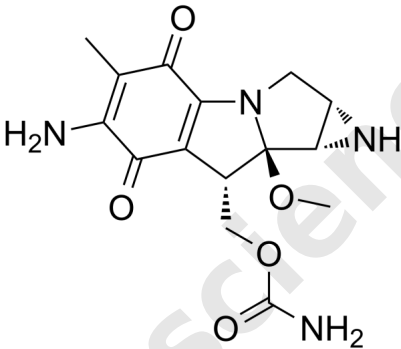


Data Sheet

Product Information

Catalog Number	BP22527
Product Name	Mitomycin C
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.
Targets&IC50	Traditional Cytotoxic Agents:
In vitro	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.
In vivo	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.

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	 <p>The chemical structure shows a central quinone-like ring system. It has an amine group (H₂N) at the 2-position and a fused pyrrolidine ring at the 3-position. The pyrrolidine ring has a methoxy group (OCH₃) and an amide side chain (NH-C(=O)-NH₂) attached to it. The amide side chain is shown with a dashed bond to the pyrrolidine ring, indicating stereochemistry.</p>

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