Mitomycin C

Catalog No.C13218 Batch:C1321803

Product Datasheet

Technical Data

Formula	$C_{15}H_{18}N_4O_5$		
Molecular Weight	334.37	**CAS No.**	50-07-7
Solubility (25°C)*	In vitro		

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Biological Activity

Description	Mitomycin C (Ametycine) is an antineoplastic antibiotic by inhibiting DNA synthesis, used to treat different cancers. Mitomycin C induces **apoptosis** in a caspases-dependent and Fas/CD95-independent manner.**This product is a hazardous chemical (acute toxicity/flammable/skin corrosive). Please use it while wearing a protective face mask, gloves, and clothing.**
Targets	DNA synthesis [1]
In vitro	Mitomycin C, by inducing DNA interstrand crosslinks, physically blocks DNA replication, recombination, and RNA transcription. [1] This compound potentiates TRAIL-induced apoptosis in HCT116 (p53-/-) colon cancer cells and sensitizes TRAIL-resistant colon cancer cells HT-29 to the cytokine by through JNK-independent upregulation of death receptors. [2] In different human cancer cell lines, such OVCAR-5 (ovary), HT-29 (colon), SK-N-MC (neuroblastoma), HEP-2 (liver), COLO-205 (colon), NIH-OVCAR-3 (ovary) and A-549 (lung) cells, this chemical shows cytotoxic activity. [3]
In vivo	As the clinical first choice in superficial bladder tumors, in a rat bladder tumor model, Mitomycin C (400 μM) significantly prevents intravesical tumor growth. [4]

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  HCT116 cells
- **Concentrations**
  5 μM
- **Incubation Time**
  24 h
- **Method**
  Cells were pre-treated with 5 μM MMC for 24 h and then co-treated with TRAIL (25 ng/mL).

Animal Study:[4]

- **Animal Models**
  Rat bladder tumor model
- **Dosages**
  400 μM
- **Administration**
  Intravesical treatment

References

https://pubmed.ncbi.nlm.nih.gov/19748363/ https://pubmed.ncbi.nlm.nih.gov/22895172/ https://pubmed.ncbi.nlm.nih.gov/24791416/

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RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

EU Headquarters
Gajeva ulica 28, HR-10000 Zagreb, Croatia

US Headquarters
12222 Merit Dr STE 130 Dallas, Texas, 75251

UK Headquarters
121 ABILITY HOUSE, BROOKER ROAD, EN9 1JH, ESSEX

Orders: Sales@capsidbio.com
Enquiries: info@capsidbio.com
www.capsidbio.com