

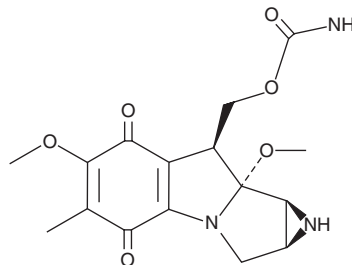
# PRODUCT INFORMATION



## Mitomycin A

Item No. 20915

**CAS Registry No.:** 4055-39-4  
**Formal Name:** (1aS,8S,8aR,8bS)-8-[[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-6,8a-dimethoxy-5-methyl-azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione  
**Synonym:** NSC 75986  
**MF:** C<sub>16</sub>H<sub>19</sub>N<sub>3</sub>O<sub>6</sub>  
**FW:** 349.3  
**Purity:** ≥95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Mitomycin A is supplied as a solid. A stock solution may be made by dissolving the mitomycin A in the solvent of choice, which should be purged with an inert gas. Mitomycin A is slightly soluble in methanol and chloroform.

### Description

Mitomycin A is a bacterial metabolite originally isolated from *S. caespitosus*.<sup>1</sup> It reduces migration inhibition factor (MIF) production by isolated human lymphocytes when used at a concentration of 0.25 µg/ml and decreases spontaneous migration of WEHI-3 murine monocytes when used at concentrations of 0.5 and 5 µg/ml.<sup>2</sup> Mitomycin A forms intra- and interstrand adducts with DNA in the presence of thiols, such as dithiothreitol (DTT).<sup>3</sup> It reduces tumor growth in P388 leukemia and B16 melanoma mouse models with a minimum effective dose (MED) of 0.05 mg/kg for both but is toxic to mice with an LD<sub>50</sub> value of 2 mg/kg.<sup>1,4</sup>

### References

1. Hata, T., Sano, Y., Sugawara, R., *et al.* Mitomycin, a new antibiotic from *Streptomyces*. I. *J. Antibiot. (Tokyo)* **9(4)**, 141-146 (1956).
2. van der Nat, J.M., Beijnen, J.H., van Dijk, H., *et al.* Suppression of migration inhibition factor (MIF) production by mitomycins *in vitro*. *Immunobiology* **172(1-2)**, 120-127 (1986).
3. Paz, M.M., Das, A., Palom, Y., *et al.* Selective activation of mitomycin A by thiols to form DNA cross-links and monoadducts: Biochemical basis for the modulation of mitomycin cytotoxicity by the quinone redox potential. *J. Med. Chem.* **44(17)**, 2834-2842 (2001).
4. Sami, S.M., Iyengar, B.S., Remers, W.A., *et al.* Preparation and antitumor activity of new mitomycin A analogues. *J. Med. Chem.* **30(1)**, 168-173 (1987).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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