Mitomycin C
from *Streptomyces caespitosus*

Catalog Number M0503 and M4287
Storage Temperature 2–8 °C

CAS RN 50-07-7
Synonyms: Ametycine; Mutamycin; MMC; Mitocin-C

Product Description

Mitomycin C inhibits DNA synthesis. It reacts covalently with DNA, *in vivo* and *in vitro*, forming crosslinks between the complementary strands of DNA. This interaction prevents the separation of the complementary DNA strands, thus inhibiting DNA replication. Mitomycin C is one of the few antibiotics known to interact with DNA in this fashion.

These products are supplied in vials containing 50 mg of powder, of which 2 mg is Mitomycin C and 48 mg is sodium chloride.

Catalog Number M4287 is cell culture tested and the recommended concentration for eukaryote cell culture use is 10–50 µg/mL.

Preparation Instructions

Mitomycin C is soluble in water (0.5 mg/mL).

A 0.5% solution in water has a pH of 6.0–7.5. A saturated solution has a pH of 5.0–9.0.

Mitomycin C undergoes rapid degradation in acidic solutions (pH <6.0). It is most likely to retain activity in aqueous solutions at pH 6–9. There are conflicting data regarding the length of time to which it can be stored before degradation occurs.

Generally, solutions at pH 6–9 can be stored at 0–5 °C for up to a week. If a precipitate forms, a fresh solution should be prepared. The precipitated solution has proven to be toxic to cells. Stock solutions should also be stored in the dark since it is readily decomposed by light.

A study has shown that the amount of Mitomycin C in a culture medium (at 38 °C) containing antibiotics with fetal calf serum was reduced by 29% after 30 minutes and by 53% after 60 minutes.

Storage/Stability

Store the product at 2–8 °C.
References
3. Supplier data.
8. Sigma data.

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