

Mitoxantrone

Catalog No: tcsc2524



Available Sizes

Size: 50mg

Size: 100mg



Specifications

CAS No:

65271-80-9

Formula:

$C_{22}H_{28}N_4O_6$

Pathway:

TGF-beta/Smad;Epigenetics;Cell Cycle/DNA Damage

Target:

PKC;PKC;Topoisomerase

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 150 mg/mL (337.47 mM)

Alternative Names:

mitozantrone

Observed Molecular Weight:

444.48

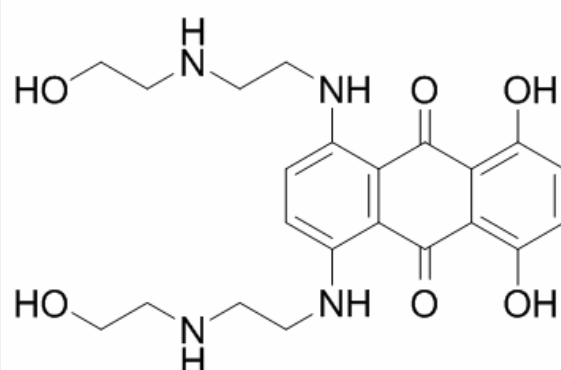
Product Description

Mitoxantrone is a **topoisomerase II** inhibitor; also inhibits protein kinase C (**PKC**) activity with an **IC₅₀** of 8.5 μ M.

IC50 & Target: IC50: 8.5 μ M (PKC)^[1]

In Vitro: Mitoxantrone inhibits PKC in a competitive manner with respect to histone H1, and its K_i value is 6.3 μ M and in a non-competitive manner with respect to phosphatidylserine and ATP^[1]. Treatment of B-CLL cells for 48 h with mitoxantrone (0.5 μ g/mL) induces a decrease in cell viability. Mitoxantrone induces DNA fragmentation and the proteolytic cleavage of poly(ADP-ribose) polymerase (PARP), demonstrating that the cytotoxic effect of mitoxantrone is due to induction of apoptosis^[2]. Mitoxantrone shows cytotoxicity to human breast carcinoma cell lines MDA-MB-231 and MCF-7 with IC₅₀ values of 18 and 196 nM, respectively^[3].

In Vivo: Mitoxantrone given IP at the optimal dose (1.6 mg/kg/day; as a free base) produces a statistically significant number of 60-day survivors (curative effect) in mice with IP implanted L1210 leukemia. In SC implanted Lewis lung carcinoma, mitoxantrone and ADM administered IV also shows effective antitumor activities and produces a 60% and a 45% ILS, respectively.^[4]



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