

Catalog Number: CM00791

产品信息

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CM00791

CAS号:
123948-87-8

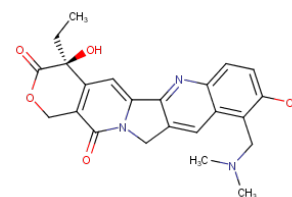
分子式:
 $C_{23}H_{23}N_3O_5$

主要靶点:
Autophagy|Topoisomerase

主要通路:
DNA 损伤和修复|自噬

分子量:
421.45

溶解度:
DMSO:84 mg/mL (199.31 mM)



体外活性

Topoisomerase I抑制剂, topotecan, 通过抑制生长及诱导GSCs和胶质瘤细胞的凋亡, 表明它们可能是针对胶质瘤的潜在抗癌化合物, 为提供新的治疗策略提供了可能性[1]。

体内活性

Topotecan-水凝胶能够向玻璃体持续输送活性药物, 具有优良的体内生物相容性以及视网膜母细胞瘤细胞中明显的细胞毒作用, 可能成为眼内视网膜母细胞瘤治疗的一个补充策略[2]。

动物实验

Hydrogel cytotoxicity was evaluated in retinoblastoma cells as a surrogate for efficacy and Topotecan vitreous pharmacokinetics and systemic as well as ocular toxicity were evaluated in rabbits. The pseudoplastic behavior of the hydrogels makes them suitable for intraocular administration. In vitro release profiles showed a sustained release of Topotecan from PCL-PEG-PCL up to 7 days and drug loading did not affect the release pattern. Blank hydrogels did not affect retinoblastoma cell viability but 0.4% (w/w) Topotecan-loaded hydrogel was highly cytotoxic for at least 7 days. After intravitreal injection, Topotecan vitreous concentrations were sustained above the pharmacologically active concentration. One month after injection, animals with blank or Topotecan-loaded hydrogels showed no systemic toxicity or retinal impairment on fundus examination, electroretinographic, and histopathological assessments[2].

细胞实验

After isolated and identified the GSCs from glioma cells successfully, U251, U87, GSCs-U251 and GSCs-U87 cells were administrated with various concentrations of shikonin or topotecan at different time points to seek for the optimal administration concentration and time point. The cell viability, cell cycle and apoptosis were detected using cell counting kit-8 and flow cytometer to observe the inhibitory effects on glioma cells and GSCs[1].

储存

keep away from direct sunlight, keep away from moisture | Powder: -20°C for 3 years | In solvent: -80°C for 1 year | Shipping with blue ice.