For Research Use Only

Anisomycin

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Catalog Number: CM02933

产品信息

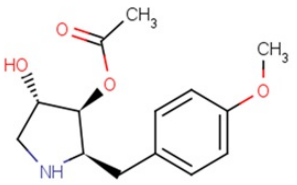
Catalog Number:
CM02933

CAS号:
22862-76-6

分子式:
$C_{14}H_{19}NO_4$

分子量:
265.3

溶解度:
DMSO:26.5 mg/mL (100 mM),Ethanol:13.3 mg/mL (50 mM)



主要靶点:
Antibacterial|Antibiotic|Apoptosis|DNA/RNA Synthesis|JNK

主要通路:
微生物学|DNA损伤和修复|凋亡|MAPK信号通路|细胞周期

体外活性

Anisomycin (3 μM) decreases protein synthesis in MDA16 and MDA-MB-468 cells, and reduces colony formation by MDA-MB-468 cells. Anisomycin causes an increase in the number of apoptotic cells in MDA-MB-468 cultures, but not in MDA16 cultures. Anisomycin actives JNK phosphorylation in MDA-MB-468 cells.[2] In U251 and U87 cells, anisomycin?(0.01-8 μM) inhibits the cell growth in time- and concentration-dependent manners with the IC50 (48 h) values of 0.233 and 0.192 μmol/L, respectively. Anisomycin?(4 μM) causes 21.5% and 25.3% of apoptosis proportion in U251 and U87 cells, respectively, and activates p38 MAPK and?JNK, while inactivated ERK1/2. Anisomycin?(4 μM) reduces the level of PP2A/C subunit in a time-dependent manner in U251 and U87 cells.[3] Anisomycin inhibits EAC cell proliferation in concentration-dependent manner.[4]

体内活性

Peritumoral administration of anisomycin (5 mg/kg) significantly suppresses Ehrlich ascites carcinoma (EAC) growth resulting in the survival of approximately 60% of the mice 90 days after EAC inoculation.[4]

细胞实验

For the assay, EAC cells are plated in 96-well plates at a density of 10,000 cells/well/200 μL of medium. The cells are treated with the different concentrations of anisomycin for 48 h. Adriamycin (500 ng/mL) is used as a positive control. 0.5 mg/mL of MTT is added to each well. 4 h later, the formazan product of MTT reduction is dissolved in DMSO, and absorbance is measured at 570 nm using a Model 680 microplate reader.(Only for Reference)

描述

Anisomycin is an antibiotic isolated from various Streptomyces species. It interferes with protein and DNA synthesis by inhibiting peptidyl transferase or the 80S ribosome system.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years