For Research Use Only

Decitabine

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Catalog Number: CM00700

产品信息

Catalog Number:
CM00700

CAS号:
2353-33-5

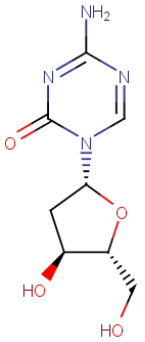
分子式:
$C_8H_{12}N_4O_4$

主要靶点:
DNA Methyltransferase|Nucleoside Antimetabolite/Analog|Apoptosis

主要通路:
凋亡|细胞周期|DNA 损伤和修复|表观遗传

分子量:
228.21

溶解度:
H2O:11.4 mg/mL (49.95 mM);DMSO:55 mg/mL (241.01 mM)



体外活性

方法：人急性白血病细胞 molt4 用 Decitabine (0.00625-100 μM) 处理 24-96 h，使用 CCK-8 方法检测细胞增殖。**结果：**Decitabine 以剂量和时间依赖的方式抑制 molt4 细胞的增殖，处理 72 h 和 96 h 的 IC50 分别为 84.461 μM 和 10.113 μM。[1] **方法：**人 BCP-ALL 细胞 SEM 和 RS4;11 用 Decitabine (1000 nM) 处理 72 h，使用 Flow Cytometry 检测细胞周期情况。**结果：**Decitabine 引起 SEM 细胞中 G0/G1 停滞。RS4;11 的细胞周期不受 Decitabine 的影响。[2]

体内活性

方法：为检测体内抗肿瘤活性，将 Decitabine (0.4 mg/kg) 腹腔注射给携带 ALL 肿瘤 SEM-ffluc-GFP 或 RS4;11-ffluc-GFP 的 NSG 小鼠，每天一次，持续三十天。**结果：**Decitabine 显著延迟了 SEM-ffluc-GFP 和 RS4-ffluc 衍生的异种移植物模型中的白血病细胞增殖。[2] **方法：**为检测体内抗肿瘤活性，将 Decitabine (0.8 mg/kg) 腹腔注射给携带人胆管癌肿瘤 TFK-1 的 Balb-c nu/nu 小鼠，每天一次，持续十四天。**结果：**在 TFK-1 小鼠异种移植物中，Decitabine 延缓了荷瘤小鼠的肿瘤生长并提高了其存活率。[3]

动物实验

For xenografts, NOD.CB17-Prkdc?scid/NCrHsd (NOD/SCID, Harlan Laboratories) mice were used. KARPAS-299 human cells were grown as described above, dissolved in sterile PBS to a concentration of 1×107 cells/ml and inoculated subcutaneously (1×10^6 cells/injection) into the right and left flanks of the mice. Tumor range was followed measuring tumor length and tumor width with a calliper. Mice weighed approximately 25 g at the beginning of the therapy. 5-Aza-CdR was dissolved in sterile PBS and was administered intraperitoneally (i.p.). Each mouse received 2.5 mg/kg/mouse per treatment. Control mice were administered 100 μl of sterile PBS. Therapies were adjusted regarding start and duration of the treatment in order to obtain optimal treatment procedures. In schedule A, three mice were treated with 5-aza-CdR 11 days after inoculation, when tumor size was approximately 1 cm2. The control group contained two mice. The mice received 5-aza-CdR or PBS every day for eight days. In schedule B, two mice were treated with 5-aza-CdR three days after inoculation and three mice five days after inoculation when tumors were not or just palpable. 5-Aza-CdR was administered every other day for five times to each mouse. The control group contained two mice [4].

细胞实验

For cell cycle analysis, KARPAS-299 cells were incubated for 24 h with 1 μM of 5-aza-CdR in RPMI and grown for 4 days in fresh RPMI only. Then, 105–106 cells were suspended in 500 μl PI-buffer (0.1% Na–citrate dihydrate, 0.1% Triton X-100, 0.1% RNAse (DNAse free) in PBS). Propidium–iodide (ROTH, dissolved in PBS) was added to a concentration of 10 μg/ml and the cells were incubated for 30 min at 37 °C. The analysis was performed on a flow cytometer using the BD FACS Diva Software. Three independent samples of 5-aza-CdR treated and PBS controls were analyzed. Descriptive statistics for analysis are reported as mean ± SEM [4].

储存

store at low temperature | Powder: -20°C for 3 years | In solvent: -80°C for 1 year | Shipping with blue ice.

For technical support and original validation data for this product please contact
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