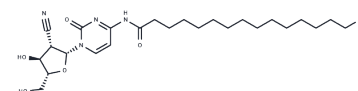


Sapacitabine

Chemical Properties

CAS No. :	151823-14-2
Formula:	C ₂₆ H ₄₂ N ₄ O ₅
Molecular Weight:	490.64
Appearance:	no data available
Storage:	store at low temperature
	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Sapacitabine (CS682) is an orally available nucleoside analog precursor compound with potential anti-tumor activity for the study of acute myeloid leukemia.
Targets(IC50)	Nucleoside Antimetabolite/Analog
In vitro	The IC ₅₀ values of sapacitabine concentrations against colon cancer cell line HCT116 and breast cancer cell line MDA-MB-435 were 3 ± 0.6 μM and 67 ± 14 μM. Cell cycle analysis showed that 35% of the cells treated with sapacitabine were arrested in the late S phase and 41% were arrested in the G2/M phase. Sapacitabine is sensitive (IC ₅₀ 20±6 μM) to L1210 cells with deoxycytidine kinase (dCK) activity [1].
In vivo	On day 14, the average tumor volume in the sapacitabine (5 mg/kg) + vorinostat (33 mg/kg) group was 245 mm ³ , and the tumor growth inhibition (TGI) was 92%, while the sapacitabine (15 mg/kg) group, the average tumor volume was 245mm ³ , and the tumor growth inhibition (TGI) was 92%; the +vorinostat (33 mg/kg) group had an average tumor volume of 107mm ³ , and the TGI was 112% [2].
Cell Research	A panel of the colon (HT29, HCT116, COLO205, HCC2998), breast (MCF7, MDA-MB-435), lung (HOP62, HOP92), ovarian (OVCAR3, IGROV1) cancer cell lines are used in this study. The cell cycle stage and percentage of apoptotic cells are assessed by flow cytometry. In brief, cells are seeded in 25 cm ³ flasks and are untreated or treated with various concentrations of Sapacitabine. At the indicated time points, adherent and non-adherent cells are collected, washed with PBS, fixed in 70% ethanol and stored at 4°C until use. Cells are rehydrated in PBS, incubated for 20?min at room temperature (25°C) with 250?μg/mL RNase A with Triton X-100 and 20?min at 4°C with 50?μg/mL propidium iodide in the dark. The cell cycle distribution and percentage of apoptotic cells are determined with a flow cytometer and analysed by FACS Calibur [1].
Animal Research	Female (nu/nu) mice are injected subcutaneously with 1×10 ⁷ MV4-11 cells resuspended in 50% Matrigel at a single site on their flanks. Once tumour volumes are 126 to 256?mm ³ (16 days post-implantation) animals are pair-matched by tumour size into treatment groups (minimum of six mice per group) with a mean tumour size of ~190?mm ³ . Tumour measurements are calculated using the formula: volume (mm ³)=width ² (mm)×length (mm)×0.5. Sapacitabine is administered once a day orally (5 or 15?mg/kg) for 4 days, followed by a 3-day break before another 4 days of treatment; dosing starts on the same day as distribution to the treatment groups [2].

Solubility Information

Solubility	DMSO: 20 mg/mL (40.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0382 mL	10.1908 mL	20.3815 mL
5 mM	0.4076 mL	2.0382 mL	4.0763 mL
10 mM	0.2038 mL	1.0191 mL	2.0382 mL
50 mM	0.0408 mL	0.2038 mL	0.4076 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Serova M, et al. Antiproliferative effects of sapacitabine (CYC682), a novel 2;-deoxycytidine-derivative, in human cancer cells. Br J Cancer. 2007 Sep 3;97(5):628-36.

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