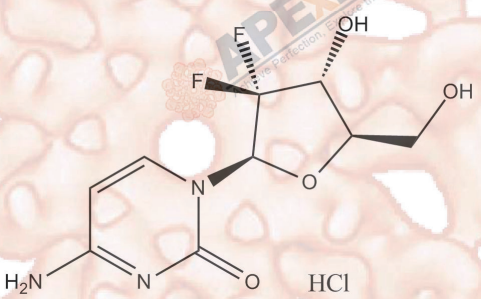
Product Data Sheet

Gemcitabine HCl



Cat. No.:	A1402
CAS No.:	122111-03-9
Formula:	C9H11F2N3O4·HCl
M.Wt:	299.66
Synonyms:	
Target:	DNA Damage/DNA Repair
Pathway:	DNA Synthesis
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

≥7.49mg/mL in H2O

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	3.3371 mL	16.6856 mL	33.3712 mL
5 mM	0.6674 mL	3.3371 mL	6.6742 mL
10 mM	0.3337 mL	1.6686 mL	3.3371 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Inhibits DNA synthesis,deoxycytidine analog
IC_{50} & Target	50 nM (PANC1), 40 nM (MIAPaCa2), 18 nM (BxPC3), 12 nM (Capan2 cell lines)

In Vitro

Cell Viability Assay

Cell Line:	COLO 357 and L3.6pl cells
Preparation method：	The solubility of this compound in DMSO is <10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.
Reacting conditions:	25 nM, 72 hours
Applications:	Cells were either pretreated with genistein (25 μmol/L) alone or in combination

		with a single dose of gemcitabine (25 nmol/L), and viable cells were evaluated at 96 hours posttreatment by MTT assay. Treatment with either genistein or gemcitabine alone for 96 hours resulted in only 25% to 30% loss of viability of COLO 357 and L3.6pl cells. However, pretreatment with genistein for 24 hours followed by treatment with gemcitabine resulted in the loss of 60% to 80% of viable cells in both the cell types investigated. These results suggests that the combination of genistein with low therapeutic doses of gemcitabine elicits significantly greater inhibition of cancer cell growth compared with either agent, suggesting that lower toxic side effects are likely to occur in normal cells.
In Vivo	**Animal experiment**	
	Animal models:	Female nude mice (ICR-SCID) injected with COLO 357 or L3.6pl cells
	Dosage form:	Intravenous injection, 80 mg/kg body weight, every other day for a total of three injections
	Applications:	Mice were randomized into the following treatment groups (n = 7): (a) untreated control; (b) only gemcitabine; (c) genistein, 1 mg genistein/d/mouse, everyday orally for 10 days; and (d) genistein and gemcitabine. Single modality treatment with either genistein or gemcitabine alone in mice harboring COLO 357 cells caused 13% and 27% reduction in tumor weight, respectively, compared with control tumors. Under identical experimental conditions, combination of genistein and gemcitabine treatment showed significant decrease in tumor weight compared with untreated control, genistein alone–, or gemcitabine alone– treated group.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1] Banerjee S, Zhang Y, Ali S, et al. Molecular evidence for increased antitumor activity of gemcitabine by genistein in vitro and in vivo using an orthotopic model of pancreatic cancer. Cancer research, 2005, 65(19): 9064-9072.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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