Capecitabine

Catalog No.C07566 Batch:C0756603

Product Datasheet

Technical Data

Formula	$C_{15}H_{22}FN_3O_6$					
Molecular Weight	359.35	**CAS No.**	154361-50-9			
Solubility (25°C)*	In vitro	DMSO	72 mg/mL (200.36 mM)			
		Ethanol	72 mg/mL (200.36 mM)			
		Water	18 mg/mL (50.09 mM)			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.
		Injection	Clear solution	5%DMSO [1]→ 40%PEG300 [2]→ 5%Tween80 [3]→ 50%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	25.000mg/ml (69.57mM)	Taking the 1 mL working solution as an example, add 50 μL of 500 mg/ml clarified DMSO stock solution to 400 μL of PEG300, mix evenly to clarify it; add 50 μL of Tween80 to the above system, mix evenly to clarify; then continue to add 500 μL of ddH2O to adjust the volume to 1 mL. The mixed solution should be used immediately for optimal results.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Biological Activity

Description	Capecitabine is a tumor-selective fluoropyrimidine carbamate, which achieves higher intratumoral 5-FU level with lower toxicity than 5-FU. Capecitabine treatment of HCT-15 cells causes condensation of DNA and induces **apoptosis**.
Targets	Thymidine phosphorylase [1]
In vitro	Both LS174T WT and LS174T-c2 cells show significantly greater sensitivity to Capecitabine when cultivated in the same plates as HepG2 hepatoma with IC50 values of 890 and 630 μM in LS174T WT alone and cultivated with HepG2, respectively. In addition, for the LS174T-C2 subline, the IC50 falls from 330 ± 4 down to 89 ± 6 μm when cultivated in the same plates as hepatoma cells. Furthermore, this compound induces apoptosis in a Fas-dependent manner, and shows a 7-fold higher cytotoxicity and markedly stronger apoptotic potential in thymidine phosphorylase (TP)-transfected LS174T-c2 cells. [1]
In vivo	In the human cancer xenograft models studied, Capecitabine is more effective in a wider dose range and has a broader spectrum of antitumor activity than 5-FU, UFT or its intermediate metabolite 5'-DFUR, which can be correlated with tumor dThdPase levels. [2] This compound inhibits tumor growth and metastatic recurrence after resection of human hepatocellular carcinoma (HCC) in highly metastatic nude mice model which is attributed to the high expression of platelet-derived endothelial cell growth factor in tumors. [3]
Features	A tumor-selective fluoropyrimidine carbamate.

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  HepG2, LS174T WT and LS174T-c2 cells
- **Concentrations**
  ~1 mM
- **Incubation Time**
  72 hours
- **Method**
  HepG2 and either LS174T WT or LS174T-c2 cells are seeded, respectively, in the top and bottom chambers of 8-well strip membranes in 96-well plates. The exponentially growing cells are exposed to increasing concentrations of capecitabine. The medium is supplemented with 750 ng/mL ZB4 MoAB or 100 ng/mL BR17 MoAB when the latter are used in the experiments. After 72 hours of continuous exposure to this compound, LS174T viability is assessed using the classic colorimetric MTT test.

Animal Study:[2]

- **Animal Models**
  BALB/c nu/nu mice are inoculated s.c. with small pieces of CXF280 xenograft tissues
- **Dosages**
  ≤1.5 mM/kg/day
- **Administration**
  Administered via p.o.

References

https://pubmed.ncbi.nlm.nih.gov/12481413/ https://pubmed.ncbi.nlm.nih.gov/9605432/ https://pubmed.ncbi.nlm.nih.gov/14676129/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

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