

Capecitabine

Catalog No: tcsc0768



Available Sizes

Size: 1g

Size: 5g

Size: 10g



Specifications

CAS No:

154361-50-9

Formula:

$C_{15}H_{22}FN_3O_6$

Pathway:

Cell Cycle/DNA Damage;Cell Cycle/DNA Damage

Target:

Nucleoside Antimetabolite/Analog;DNA/RNA Synthesis

Purity / Grade:

>98%

Solubility:

DMSO : 100 mg/mL (278.28 mM; Need ultrasonic); H2O : \geq 33.33 mg/mL (92.75 mM)

Observed Molecular Weight:

359.35

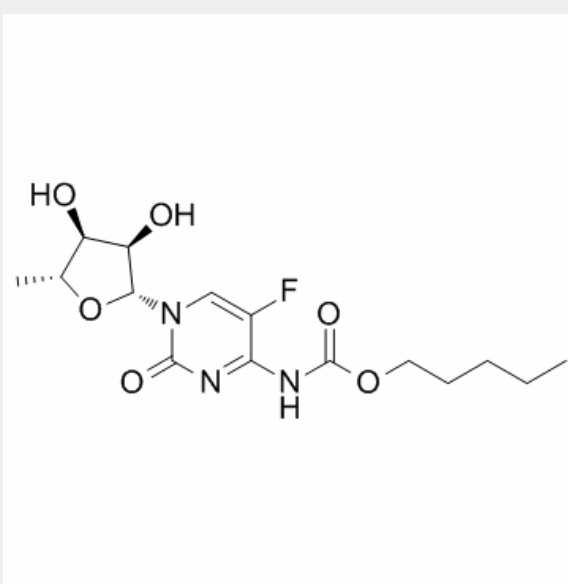
Product Description

Capecitabine is an oral prodrug that is converted to its only active metabolite, fluorouracil (FU), by thymidine phosphorylase.

IC₅₀ & Target: DNA/RNA Synthesis^[1]

In Vitro: Capecitabine is an anti-cancer chemotherapy drug. It is classified as an antimetabolite. Capecitabine is converted into 5'-deoxy-5-fluorocytidine (5'DFCR), 5'-deoxy-5-fluorouridine (5'DFUR) and 5-fluorouracil (5-FU) by carboxylesterases (CES1 and 2), cytidine deaminase (CDD), and thymidine phosphorylase (TP), in both liver and tumour. Capecitabine induces a significant cytotoxic effect in vitro only at high concentrations. Mean IC₅₀ values vary from 860 µM in COLO205 cells to 6000 µM in HCT8 cells^[2].

In Vivo: A pharmacokinetic/pharmacodynamic study is carried out in mice bearing HCT 116 xenografts receiving 0.52 and 2.1 mmol/kg/d of Capecitabine by oral gavage. Capecitabine administered at 0.52 mmol/kg/day induces partial control of HCT 116 xenografts tumour growth: growth rate = 7.5±0.5 on day 21. Capecitabine 2.1 mmol/kg/day achieves complete control of tumor growth during the treatment period: growth rate = 1±0.2 on day 21^[2].



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