

5-Fluorouracil

Catalog No: tcsc0993



Available Sizes

Size: 1g

Size: 5g



Specifications

CAS No:

51-21-8

Formula:

$C_4H_3FN_2O_2$

Pathway:

Cell Cycle/DNA Damage

Target:

Nucleoside Antimetabolite/Analog

Purity / Grade:

>98%

Solubility:

DMSO : 15 mg/mL (115.31 mM; Need ultrasonic and warming)

Alternative Names:

5-FU

Observed Molecular Weight:

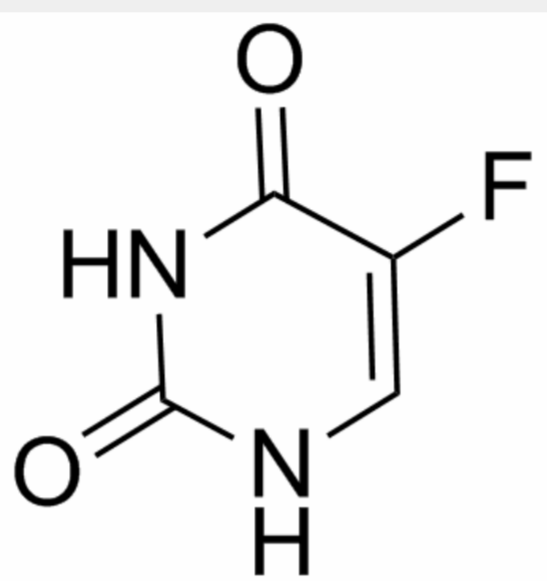
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Product Description

5-Fluorouracil is a potent antitumor agent that affects pyrimidine synthesis by inhibiting **thymidylate synthetase** thus depleting intracellular dTTP pools.

In Vitro: 5-Fluorouracil (5-Fu) and doxorubicin (Dox) show synergistic anticancer efficacy. The IC_{50} value of 5-Fu/Dox-DNM toward human breast cancer (MDA-MB-231) cells is 0.25 $\mu\text{g/mL}$, presenting an 11.2-fold and 6.1-fold increase in cytotoxicity compared to Dox-DNM and 5-Fu-DNM, respectively^[1]. In 5-fluorouracil (5-FU) and CDDP treated NFBD1-inhibited NPC cells, the NFBD1 expression in NPC CNE1 cell lines is depleted using lentivirus-mediated short hairpin RNA, and the sensitivity of these cells is elevated. NFBD1 knockdown leads to an obvious induction of apoptosis in CDDP- or 5-FU-treated CNE1 cells^[3].

In Vivo: 5-Fluorouracil (23 mg/kg, 3 times/week) for 14 days, induces accelerated gastrointestinal transit associated with acute intestinal inflammation at day 3 after the start of treatment, which may have led to persistent changes in the ENS observed after days 7 and 14 of treatment contributing to delayed gastrointestinal transit and colonic dysmotility^[2].



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