Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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:
130.08

Product Description

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

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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 μg/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].