For Research Use Only

Capecitabine

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Catalog Number: CM00971

产品信息

Catalog Number:
CM00971

CAS号:
154361-50-9

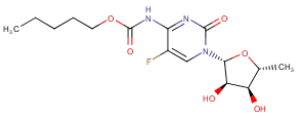
分子式:
$C_{15}H_{22}FN_3O_6$

主要靶点:
Apoptosis|DNA/RNA Synthesis|Nucleoside Antimetabolite/Analog

主要通路:
凋亡|细胞周期|DNA损伤和修复

分子量:
359.35

溶解度:
DMSO:35.9 mg/mL (100 mM),Ethanol:35.9 mg/mL (100 mM)



体外活性

作用于高肝转移裸鼠时,Capecitabine对肿瘤生长和转移复发的人肝细胞癌均有抑制作用,这是因为血小板驱动的内皮细胞生长因子在肿瘤中高表达.与5-FU,UFT及其中间代谢物5'-DFUR相比,Capecitabine对人类移植瘤更具有广泛的抗癌活谱性,这与肿瘤dThdPase水平相关.

体内活性

Capecitabine以Fas依赖性地方式诱导凋亡,且对胸苷磷酸化酶-转染的LS174T-c2 细胞的毒性强7倍、凋亡更明显。培养在与HepG2细胞相同的板中时,LS174TWT和 LS174T-c2细胞对Capecitabine敏感性的较强,Capecitabine与LS174TWT单独培养时的IC50为890 μM,与HepG2一起培养的IC50为630 μM。此外, LS174T-C2亚型培养在和HepG2相同的板中时, IC50从330±4降至89±6 μM。

细胞实验

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, LS174T viability is assessed using the classic colorimetric MTT test.(Only for Reference)

描述

Capecitabine is a fluoropyrimidine carbamate belonging to the class of antineoplastic agents called antimetabolites. As a prodrug, capecitabine is selectively activated by tumor cells to its cytotoxic moiety, 5-fluorouracil (5-FU); subsequently, 5-FU is metabolized to two active metabolites, 5-fluoro-2-deoxyuridine monophosphate (FdUMP) and 5-fluorouridine triphosphate (FUTP) by both tumor cells and normal cells. FdUMP inhibits DNA synthesis and cell division by reducing normal thymidine production, while FUTP inhibits RNA and protein synthesis by competing with uridine triphosphate for incorporation into the RNA strand.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years