5-Fluorouracil

货号：F9496

储存条件：粉末-20°C 可保存 3 年；液体-80°C 可保存 12 月。

产品描述

5-Fluorouracil (5-FU), or combined with other chemotherapeutic agents, is widely used in the treatment of a range of cancers, including colorectal and breast cancers, head and neck cancers, cancers of the aerodigestive tract[1]. 5-Fluorouracil can disrupt RNA synthesis through RNA mis-incorporation by its active metabolites, as well as block dTMP synthesis through inhibition of thymidylate synthase. After entering into cells, 5-Fluorouracil can be converted to its active metabolites, fluorodeoxyuridine monophosphate (FdUMP), fluorodeoxyuridine triphosphate (FdUTP) and fluorouridine triphosphate[2]. FdUMP can inhibit the thymidylate synthase through binding to the nucleotide-binding site of thymidylate synthase, thus blocking the binding of normal substrate dUMP and inhibiting dTMP synthesis. And this will cause the disruption of DNA replication and repair[3]. FUTP can extensively incorporate into RNA and disrupt RNA processing and function[4]. Thus, 5-Fluorouracil showed cytotoxicity in various cells.

作用机制

The mechanism of cytotoxicity of 5-FU has been ascribed to the mis-incorporation of fluoronucleotides into RNA and DNA, as well as the inhibition of thymidylate synthase[4].

产品信息

CAS 号	51-21-8	
分子式	C4H3FN2O2	
分子量	130.08	
别名	NSC 19893;5-FU	
溶解度	DMSO	100.0 mg/mL (768.8 mM) warming
	Water	insoluble