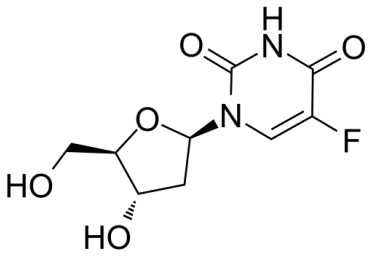
Data Sheet

Product Name:	Floxuridine
Cat. No.:	CS-1827
CAS No.:	50-91-9
Molecular Formula:	C9H11FN2O5
Molecular Weight:	246.19
Target:	Nucleoside Antimetabolite/Analog
Pathway:	Cell Cycle/DNA Damage
Solubility:	DMSO : ≥ 150 mg/mL (609.29 mM); H2O : ≥ 50 mg/mL (203.10 mM)



BIOLOGICAL ACTIVITY:

Floxuridine (5-fluorodeoxyuridine) is an oncology drug that belongs to the class known as antimetabolites with an GI50 of 5.1 μM for the inhibition of PEPT1. IC50 value: Target: Nucleoside antimetabolite/analog Floxuridine (Fludara) is a prodrug of floxuridine and an oncology agent with an GI50 of 5.1 μM for the inhibition of MDCK/PEPT1. Floxuridine (Fludara) belongs to the class known as antimetabolites. Floxuridine (Fludara) is most often used in the treatment of colorectal cancer. Floxuridine, an analog of 5-fluorouracil, is a fluorinated pyrimidine. Floxuridine (Fludara) works because it is broken down by the body into its active form, which is the same as a metabolite of 5-Fluorouracil [1]. FdUrd induced an immediate increase in tumor uptake of 5-[(125)I]iodo-2'-deoxyuridine, that vanished after 6 h, as also confirmed by flow cytometry. Biodistribution measurements showed that FdUrd pretreatment increased [(18)F]FLT uptake in all tumors by factors of 3.2 to 7.8 compared with controls, while [(18)F]FDG tumor uptake was about fourfold and sixfold lower in breast cancers and lymphoma. Dynamic PET in FdUrd pretreated mice showed that [(18)F]FLT uptake in all tumors increased steadily up to 1.5 h. MRI showed a well-vascularized homogenous lymphoma with high [(18)F]FLT uptake, while in breast cancer, a central necrosis shown by MRI was inactive in PET, consistent with the histomorphological analysis [2]. Clinical indications: Colorectal tumor; Liver tumor FDA Approved Date: December 1970

References:

[1]. Landowski CP, et al. Targeted delivery to PEPT1-overexpressing cells: acidic, basic, and secondary floxuridine amino acid ester prodrugs. Mol Cancer Ther. 2005 Apr;4(4):659-67.

[2]. Viertl D, et al. Increase of [(18)F]FLT tumor uptake in vivo mediated by FdUrd: toward improving cell proliferation positron emission tomography. Mol Imaging Biol. 2011 Apr;13(2):321-31.

CAIndexNames:

Uridine, 2'-deoxy-5-fluoro-

SMILES:

OC[C@@H]1[C@H](C[C@H](N2C(NC(C(F)=C2)=O)=O)O1)O

Caution: Product has not been fully validated for medical applications. For research use only.

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