TOCRIS bioscience

Print Date: Apr 28th 2015

Certificate of Analysis

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Product Name: **Fludarabine** **Catalog No.: 3495** **Batch No.: 1**

CAS Number: 21679-14-1 EC Number: 244-525-5

IUPAC Name: 9-β-D-Arabinofuranosyl-2-fluoro-9*H*-purin-6-amine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{10}H_{12}FN_5O_4$

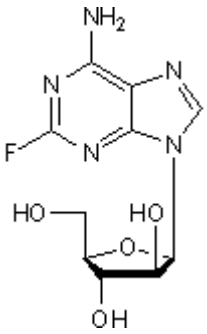
Batch Molecular Weight: 285.23

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 261 - 262°C

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	42.11	4.24	24.55
Found	42.15	4.19	24.42

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Description:

Purine analog that inhibits DNA synthesis. Exhibits antiproliferative activity (IC_{50} = 1.54 µM in RPMI cells) and triggers apoptosis through increasing Bax and decreasing Bid, XIAP and survivin expression. Displays anticancer activity against hematological malignancies in vivo.

Physical and Chemical Properties:

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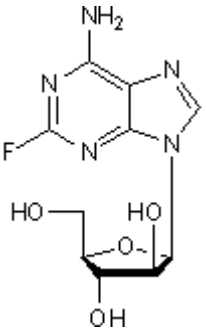
Batch Molecular Weight: 285.23

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Bellosillo *et al* (1999) In vitro evaluation of fludarabine in combination with cyclophosphamide and/or mitoxantrone in B-cell chronic lymphocytic leukemia. Blood ***94*** 2836. PMID: 10515887.

Meng *et al* (2007) Antitumor activity of fludarabine against human multiple myeloma *in vitro* and *in vivo*. Eur.J.Haematol. ***79*** 486. PMID: 17976186.

Torella *et al* (2007) Fludarabine prevents smooth muscle proliferation in vitro and neointimal hyperplasia *in vivo* through specific inhibition of STAT-1 activation. Am.J.Physiol.Heart Circ.Physiol. ***292*** H2935. PMID: 17293493.