

Certificate of Analysis

www.tocris.com

Product Name: Fludarabine

CAS Number: 21679-14-1

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

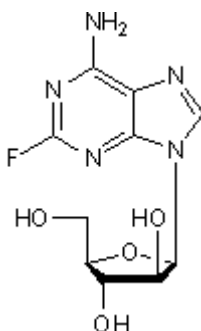
Catalog No.: 3495

Batch No.: 1

EC Number: 244-525-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀H₁₂FN₅O₄
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
¹H 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

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

Product Name: Fludarabine

CAS Number: 21679-14-1

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

Catalog No.: 3495

Batch No.: 1

EC Number: 244-525-5

Description:

Purine analog that inhibits DNA synthesis. Exhibits antiproliferative activity (IC₅₀ = 1.54 μM in RPMI cells) and triggers apoptosis through increasing Bax and decreasing Bid, XIAP and survivin expression. Inhibits cytokine-induced activation of STAT1 and STAT1-dependent gene transcription in lymphocytes. Also displays anticancer activity against hematological malignancies *in vivo*.

Physical and Chemical Properties:

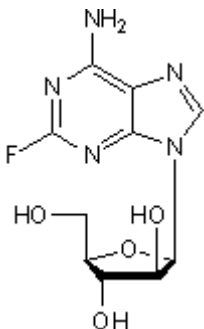
Batch Molecular Formula: C₁₀H₁₂FN₅O₄

Batch Molecular Weight: 285.23

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



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.

Frank et al (1999) Fludarabine-induced immunosuppression is associated with inhibition of STAT1 signaling. *Nat.Med.* **5** 444. PMID: 10202937.

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.

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.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956