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## Produktinformation



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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](http://linkedin.com/company/szaboscandic)



# PRODUCT INFORMATION



## Fludarabine

Item No. 14128

CAS Registry No.: 21679-14-1

Formal Name: 9- $\beta$ -D-arabinofuranosyl-2-fluoro-9H-purin-6-amine

Synonyms: F-ara-A, NSC 118218

MF: C<sub>10</sub>H<sub>12</sub>FN<sub>5</sub>O<sub>4</sub>

FW: 285.2

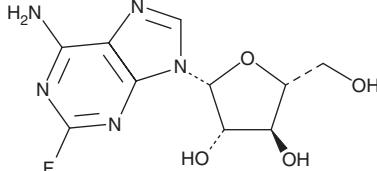
Purity:  $\geq 98\%$

UV/Vis.:  $\lambda_{\text{max}}$ : 261 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability:  $\geq 2$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Fludarabine is supplied as a crystalline solid. A stock solution may be made by dissolving the fludarabine in the solvent of choice. Fludarabine is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of fludarabine in DMSO and DMF is approximately 11 and 3.3 mg/ml, respectively.

Fludarabine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fludarabine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Fludarabine has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Because of their antitumor activity *via* inhibition of DNA synthesis, purine nucleoside derivatives resistant to deamination have been developed for the treatment of various leukemias.<sup>1,2</sup> Fludarabine is an adenosine deaminase resistant analog of 9- $\beta$ -D-arabinofuranosyladenine (ara-A) that disrupts ribonucleotide reductase and DNA polymerase in blood cells. It exhibits antiproliferative activity (IC<sub>50</sub> = 1.54  $\mu$ M in an RPMI-8226 myeloma cell line) and triggers apoptosis through increasing Bax and decreasing Bid, XIAP, and survivin expression.<sup>3,4</sup> Fludarabine is effective in a number of animal tumor systems including LI210 leukemia, CD8F mammary adenocarcinoma, P388 leukemia, and human LX-1 lung tumor xenograft and displays anticancer activity against human hematological malignancies *in vivo*.<sup>5-7</sup>

### References

- Chao, D.L.S. and Kimball, A.P. *Cancer Res.* **32**, 1721-1724 (1972).
- Tallman, M.S. and Hakimian, D. *Blood* **86**(7), 2463-2474 (1995).
- Meng, H., Yang, C., Ni, W., et al. *Eur. J. Haematol.* **79**(6), 486-493 (2007).
- Bellosillo, B., Villamor, N., Colomer, D., et al. *Blood* **94**(8), 2836-2843 (1999).
- Spriggs, D.R., Stopa, E., Mayer, R.J., et al. *Cancer Res.* **46**, 5953-5958 (1986).
- Tournilhac, O., Cazin, B., Leprêtre, S., et al. *Blood* **103**(1), 363-365 (2004).
- Rai, K.R., Peterson, B.L., Appelbaum, F.R., et al. *N. Engl. J. Med.* **343**(24), 1750-1757 (2000).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 - USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM