



Product Information

Product ID F4782

CAS No. 75607-67-9

Chemical Name

Synonym F-ara-A

Formula $C_{10}H_{13}FN_5O_7P$

Formula Wt. 365.21

Melting Point

Purity $\geq 98\%$

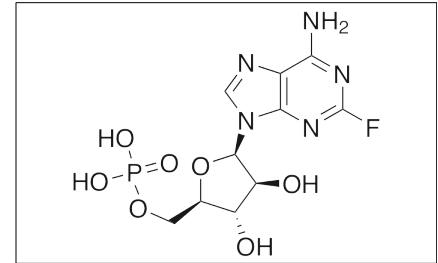
Solubility Slightly soluble in water (6 mg/mL). Soluble in DMSO (70 mg/mL)

Store Temp Ambient

Ship Temp Ambient

Description

Fludarabine is a purine nucleoside analog of adenosine that exhibits anti-inflammatory, immunosuppressive, and anticancer chemotherapeutic activities. Fludarabine is clinically used to treat acute myelogenous leukemia (AML), chronic lymphocytic leukemia (CLL), and other lymphoid malignancies. Fludarabine is also used to prevent graft-versus-host disease (GVHD) during hematopoietic stem cell transplantation. Fludarabine is incorporated into DNA and RNA, inhibiting ribonucleotide reductase, DNA polymerase, DNA ligase, and DNA primase, preventing DNA repair and synthesis. In Jurkat T cells, fludarabine inhibits TNF- α -stimulated production of IL-2 and IFN- γ and degradation of I κ B kinase, inhibiting activity of NF- κ B. In other in vitro models, fludarabine induces apoptosis and inhibits cell growth. Additionally, this compound binds and activates A1 adenosine receptors.



Bulk quantities available upon request

Product ID	Size
F4782	5 mg
F4782	10 mg
F4782	25 mg
F4782	100 mg

References Robak P and Robak T. Older and new purine nucleoside analogs for patients with acute leukemias. *Cancer Treat Rev.* 2013 Dec;39(8):851-61. PMID: 23566572.

Jensen K, Johnson LA, Jacobson PA, et al. Cytotoxic purine nucleoside analogues bind to A1, A2A, and A3 adenosine receptors. *Naunyn Schmiedebergs Arch Pharmacol.* 2012 May;385(5):519-25. PMID: 22249336.

Nishioka C, Ikezoe T, Togitani K, et al. Fludarabine induces growth arrest and apoptosis of cytokine- or alloantigen-stimulated peripheral blood mononuclear cells, and decreases production of Th1 cytokines via inhibition of nuclear factor kappaB. *Bone Marrow Transplant.* 2008 Feb;41(3):303-9. PMID: 17994120.

Gandhi V, Plunkett W. Cellular and clinical pharmacology of fludarabine. *Clin Pharmacokinet.* 2002;41(2):93-103. PMID: 11888330.

Yamauchi T, Nowak BJ, Keating MJ, et al. DNA repair initiated in chronic lymphocytic leukemia lymphocytes by 4-hydroperoxycyclophosphamide is inhibited by fludarabine and clofarabine. *Clin Cancer Res.* 2001 Nov;7(11):3580-9. PMID: 11705880.

Catapano CV, Perrino FW, Fernandes DJ. Primer RNA chain termination induced by 9-beta-D-arabinofuranosyl-2-fluoroadenine 5'-triphosphate. A mechanism of DNA synthesis inhibition. *J Biol Chem.* 1993 Apr 5;268(10):7179-85. PMID: 7681821.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.