LKT Laboratories, Inc.

Fludarabine

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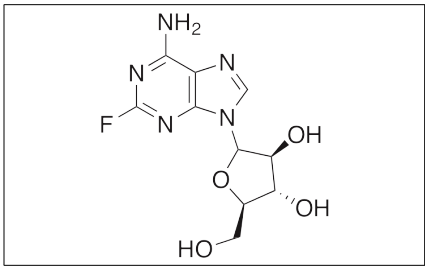
Product Information

Product ID F4781
CAS No. 21679-14-1
Chemical Name

Synonym 2-Fluoroadenine-9-b-D-arabinofuranoside



Formula $C_{10}H_{12}FN_5O_4$
Formula Wt. 285.23
Melting Point 260°C
Purity ≥98%
Solubility Slightly soluble in water (3.5 mg/mL). Soluble in DMSO (100 mM)

Bulk quanitites available upon request

Product ID	Size
F4781	5 mg
F4781	10 mg
F4781	25 mg

Store Temp Ambient
Ship Temp Ambient

Description Fludarabine is a purine nucleoside analog of adenosine that is clinically used to treat leukemias such as chronic lymphocytic leukemia (CLL) and also to treat graft-versus-host disease (GVHD) in transplant patients. Fludarabine exhibits anticancer chemotherapeutic and immunosuppressive activities. Incorporation of fludarabine into DNA chains inhibits ribonucleotide reductase, DNA ligase, and DNA primase, inducing chain termination and preventing DNA synthesis. In vitro, fludarabine inhibits TNF-α-stimulated degradation of IκB kinase, preventing activation of NF-κB. This compound also induces cell cycle arrest and apoptosis in alloreactive bone marrow stromal cells. Like other adenosine analogs, fludarabine also acts as an antagonist at the A1 adenosine receptor.

References

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.