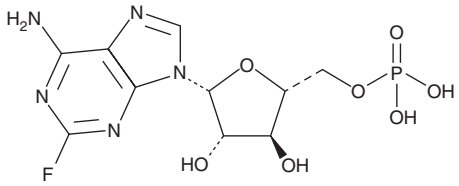
PRODUCT INFORMATION

Fludarabine Phosphate

Item No. 14251

CAS Registry No.: 75607-67-9
Formal Name: 2-fluoro-9-(5-O-phosphono-β-D-arabinofuranosyl)-9H-purin-6-amine
Synonyms: 2F-ara-AMP, 2-fluoro-ara-AMP, 2-fluoroadenine Arabinoside-5-phosphate, FAMP, NSC 312887, NSC 328002
MF: $C_{10}H_{13}FN_5O_7P$
FW: 365.2
Purity: ≥95%
UV/Vis.: λ_{max}: 261 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Fludarabine phosphate is supplied as a crystalline solid. Aqueous solutions of fludarabine phosphate can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of fludarabine phosphate in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Fludarabine phosphate is a prodrug form of fludarabine (Item No. 14128) and 2-fluoro-ara-ATP.[1] It is dephosphorylated *in vivo* to fludarabine and re-phosphorylated intracellularly to the active form, 2-fluoro-ara-ATP, which inhibits DNA synthesis.[2,3] Fludarabine phosphate reduces viability of, and induces apoptosis in, N-Myc-overexpressing LASCPC-01 neuroendocrine prostate cancer cells (IC_{50} = 17.67 µM).[1] It also reduces N-Myc protein levels when used at a concentration of 25 µM for at least 48 hours but does not reduce the levels of N-Myc mRNA. Fludarabine phosphate (120 mg/kg per day) reduces tumor volume in N-Myc-overexpressing 22Rv1-N-Myc and LASCPC-01, but not non-N-Myc-overexpressing 22Rv1, mouse xenograft models. Fludarabine phosphate is also an inhibitor of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA-dependent RNA polymerase (RdRp; EC_{50} = 0.93 µM).[4] Formulations containing fludarabine phosphate have been used in the treatment of B cell chronic lymphocytic leukemia (CLL).

References

1. Elhasasna, H., Khan, R., Bhanumathy, K.K., *et al. Cells* **11(14),** 2246 (2022).
2. Mittelman, A., Savona, S., Puccio, C., *et al. Invest. New Drugs* **8,** S65-S67 (1990).
3. Plunkett, W., Chubb, S., Alexander, L., *et al. Cancer Res.* **40(7),** 2349-2355 (1980).
4. Zhao, J., Liu, Q., Yi, D., *et al. Antiviral Res.* **198,** 105254 (2022).

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