



LKT Laboratories, Inc.

## Clofarabine

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### Product Information

**Product ID** C4646

**CAS No.** 123318-82-1

**Chemical Name** (2R,3R,4S,5R)-5-(6-amino-2-chloropurin-9-yl)-4-fluoro-2-(hydroxymethyl)oxolan-3-ol

**Synonym**

**Formula** C<sub>10</sub>H<sub>11</sub>ClFN<sub>5</sub>O<sub>3</sub>

**Formula Wt.** 303.68

**Melting Point** 228-231 °C

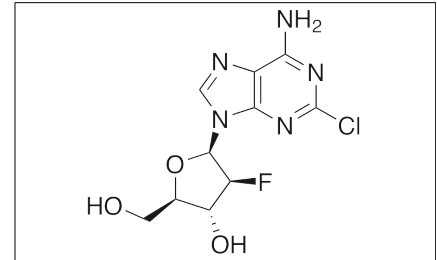
**Purity** ≥98%

**Solubility** 10mM H<sub>2</sub>O, 100mM DMSO

**Store Temp** Ambient

**Ship Temp** Ambient

**Description** Clofarabine is a second-generation nucleoside analog of adenosine. Clofarabine inhibits DNA polymerase and ribonucleotide reductase through binding in the A-site, preventing DNA synthesis. Clofarabine is clinically used to treat acute lymphoblastic leukemia (ALL) and is in clinical trials as a potential treatment for other leukemias. Clofarabine exhibits anticancer chemotherapeutic activity, acting as a cytotoxic agent. Clofarabine also binds A1, A2, and A3 adenosine receptors.



**Bulk quantities available upon request**

Product ID	Size
C4646	5 mg
C4646	10 mg
C4646	25 mg
C4646	100 mg

**References** Robak P, 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.

Majda K, Lubecka K, Kaufman-Szymczyk A, et al. Clofarabine (2-chloro-2'-fluoro-2'-deoxyarabinosyladenine)--biochemical aspects of anticancer activity. *Acta Pol Pharm.* 2011 Jul-Aug;68(4):459-66. PMID: 21796927.

Aye Y, Stubbe J. Clofarabine 5'-di and -triphosphates inhibit human ribonucleotide reductase by altering the quaternary structure of its large subunit. *Proc Natl Acad Sci U S A.* 2011 Jun 14;108(24):9815-20. PMID: 21628579.

Parker WB, Shaddix SC, Chang CH, et al. Effects of 2-chloro-9-(2-deoxy-2-fluoro-beta-D-arabinofuranosyl)adenine on K562 cellular metabolism and the inhibition of human ribonucleotide reductase and DNA polymerases by its 5'-triphosphate. *Cancer Res.* 1991 May 1;51(9):2386-94. PMID: 1707752.

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