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Clofarabine

National Cancer Institute

Source

National Cancer Institute. *Clofarabine*. NCI Thesaurus. Code C26638.

A second generation purine nucleoside analog with antineoplastic activity. Clofarabine is phosphorylated intracellularly to the cytotoxic active 5'-triphosphate metabolite, which inhibits the enzymatic activities of ribonucleotide reductase and DNA polymerase, resulting in inhibition of DNA repair and synthesis of DNA and RNA. This nucleoside analog also disrupts mitochondrial function and membrane integrity, resulting in the release of pre-apoptotic factors, including cytochrome C and apoptotic-inducing factors, which activate apoptosis.