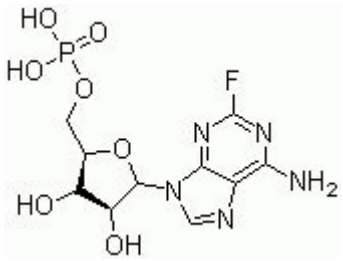
Product Introduction

Fludarabine Phosphate

Fludarabine Phosphate is an analogue of adenosine and deoxyadenosine, which is able to compete with dATP for incorporation into DNA and inhibit DNA synthesis.

Technical Data:

Molecular Weight (MW):	365.21	
Formula:	$C_{10}H_{13}FN_5O_7P$	
Solubility (25°C) * <1 mg/ml means slightly soluble or insoluble:	DMSO 73 mg/mL	
	Water 6 mg/mL	
	Ethanol <1 mg/mL	
Purity:	>98%	
Storage:	3 years -20℃Powder	
	6 months-80℃in DMSO	
CAS No.:	75607-67-9	

Biological Activity

Fludarabine Phosphate is converted to F-ara-ATP in cells and then incorporated into DNA in a self-limiting manner. Fludarabine Phosphate competes with dATP for incorporation into the A site of the extending DNA strand, which results in termination of DNA strand elongation. Human DNA polymerase α incorporates more Fludarabine Phosphate into DNA than polymerase δ. Fludarabine Phosphate completively inhibits DNA polymerase α and DNA polymerase δ with K_i of 1.1 μM and 1.3 μM, respectively. DNA polymerase δ is also able to excise the incorporated Fludarabine Phosphate from DNA in vitro. [1]

Note： Products protected by valid patents are not offered for sale in countries where the sale of such products constitutes a patent infringement and its liability is at buyer's risk. This item is only for R&D purpose not for commercial business in kilos. Buyers should overview the patent issue in their countries.

Fludarabine Phosphate is toxic for tumor-free mice. The maximum tolerated dose (LD10) Fludarabine Phosphate administered as a single dose is 234 mg/kg. The 50% lethal dose is 375 mg/kg. Fludarabine Phosphate administered as a single dose induces fewer number of cells surviving therapy in mice bearing P388 leukemia, accompanied by greater percentage of increase in life span (110%) and increased median survival time. [3]

References

[1] Huang P, et al, J Biol Chem, 1990, 265(27), 16617-16625.

[2] Umbach GE, et al. Invest New Drugs, 1984, 2(3), 263-265.

[3] Avramis VI, et al. Cancer Res, 1982, 42(7), 2587-2591.

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