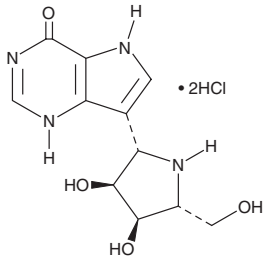
PRODUCT INFORMATION

Forodesine (hydrochloride)

Item No. 39609

Formal Name:	7-[(2S,3S,4R,5R)-3,4-dihydroxy-5-(hydroxymethyl)-2-pyrrolidinyl]-3,5-dihydro-4H-pyrrolo[3,2-d]pyrimidin-4-one, dihydrochloride
MF:	$C_{11}H_{14}N_4O_4 \bullet 2HCl$
FW:	339.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 230 nm
Supplied as:	A 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

Forodesine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the forodesine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Forodesine (hydrochloride) is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of forodesine (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of forodesine (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Forodesine is a purine nucleoside derivative and purine nucleoside phosphorylase (PNP) inhibitor (IC_{50}s = 1.19, 0.48, 1.24, 0.66, and 1.57 nM for human, mouse, rat, monkey, and dog PNP, respectively).[1] It inhibits phytohemagglutinin A-, mixed lymphocyte reaction-, or IL-2-induced proliferation of isolated human peripheral blood lymphocytes (PBLs; IC_{50}s = <0.1-0.38 µM) in the presence, but not absence, of 2'-deoxyguanosine (Item No. 9002864). Forodesine inhibits the proliferation of CEM-SS T cell acute lymphoblastic leukemia (T-ALL) cells.[2] *In vivo*, forodesine (10 mg/kg) prolongs survival in the hu-PBL-SCID mouse model of xenogeneic graft versus host disease (GVHD).[1]

References

1. Bantia, S., Miller, P.J., Parker, C.D., *et al.* Purine nucleoside phosphorylase inhibitor BCX-1777 (immucillin-H)-a novel potent and orally active immunosuppressive agent. I*nt. Immunopharmacol.* **1(6)**, 1199-1210 (2001).
2. Al-Kali, A., Gandhi, V., Ayoubi, M., *et al.* Forodesine: Review of preclinical and clinical data. *Future Oncol.* **6(8)**, 1211-1217 (2010).

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