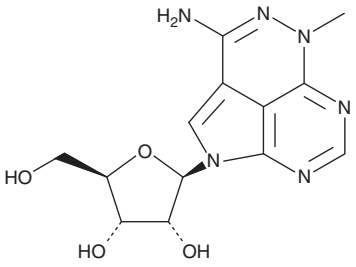
PRODUCT INFORMATION

Triciribine

Item No. 10010237

CAS Registry No.:	35943-35-2
Formal Name:	1,5-dihydro-5-methyl-1-β-D-ribofuranosyl-1,4,5,6,8-pentaazaacenaphthylen-3-amine
Synonyms:	API 2, NSC 154020, TCN, Tricyclic Nucleoside
MF:	$C_{13}H_{16}N_6O_4$
FW:	320.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 295 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

Triciribine is supplied as a crystalline solid. A stock solution may be made by dissolving the triciribine in the solvent of choice, which should be purged with an inert gas. Triciribine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of triciribine in these solvents is approximately 5, 30, and 25 mg/ml, respectively.

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 triciribine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of triciribine in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Triciribine is an Akt activation inhibitor and a prodrug form of triciribine phosphate (Item No. 37985).[1,2] It reduces levels of phosphorylated Akt1, -2, and -3 in *Akt*-overexpressing NIH3T3 cells when used at a concentration of 1 µM.[1] Triciribine is selective for Akt1, -2, and -3 over a panel of seven other Akt-activating kinases at 1 µM. It reduces the proliferation of L1210 mouse leukemia cells when used at concentrations of 0.05, 0.2, and 1 µM.[2] Triciribine (1 µM) induces cell cycle arrest at the G_1 phase in L1210 cells.[1] It reduces viral plaque formation in CEM-SS cells and human foreskin fibroblasts (HFFs) infected with HIV-1 and human cytomegalovirus (CMV), respectively (IC_{50}s = 0.02 and 2 µM, respectively).[3] It inhibits tumor proliferation in an OVCAR-3 ovarian cancer mouse xenograft model when administered at a dose of 1 mg/kg per day.[1]

References

1. Yang, L., Dan, H.C., Sun, M., *et al.* Akt/protein kinase B signaling inhibitor-2, a selective small molecule inhibitor of Akt signaling with antitumor activity in cancer cells overexpressing Akt. *Cancer Res.* **64(13)**, 4394-4399 (2004).
2. Wotring, L.L., Passiatore, J.E., Roti Roti, J.L., *et al.* Effects of the tricyclic nucleoside 6-amino-4-methyl-8-(β-D-ribofuranosyl)- pyrrolo[4,3,2-de]pyrimido[4,5-c]pyridazine on the viability and cell cycle distribution of L1210 cells *in vitro*. *Cancer Res.* **45(12 Pt 1)**, 6355-6361 (1985).
3. Kucera, L.S., Iyer, N.P., Puckett, S.H., *et al.* Activity of triciribine and triciribine-5'-monophosphate against human immunodeficiency virus types 1 and 2. *AIDS Res. Hum. Retroviruses* **9(4)**, 307-314 (1993).

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