

Product Data Sheet

Product Name: Olomoucine II

Cat. No.: GC48652

Chemical Properties

Cas. No. 500735-47-7

SMILES OC[C@H](NC1=NC(NCC2=C(O)C=CC=C2)=C3N=CN(C(C)C)C3=N1)CC

Formula C₁₉H₂₆N₆O₂

M.Wt 370.5

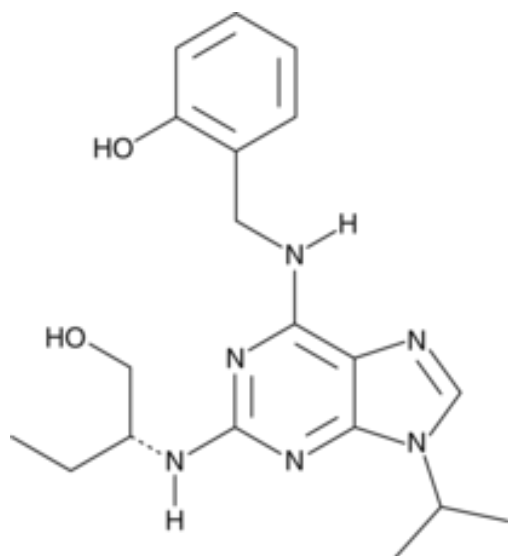
Solubility DMSO: soluble, Methanol: soluble

Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Olomoucine II is an inhibitor of cyclin-dependent kinases (CDKs; IC₅₀s = 7.6, 0.1, 19.8, 0.45, and 0.06 μM for Cdk1, -2, -4, -7, and -9, respectively).¹ It is selective for CDKs over 10 additional kinases (IC₅₀s = >100 μM for all) but does inhibit ERK2 (IC₅₀ = 32 μM) and the ATP-binding cassette transporter B1 (ABCB1; IC₅₀ = 6.4 μM).^{1,2} Olomoucine II inhibits proliferation of a variety of cancer cells, including those expressing wild-type p53 or mutant p53 (mean IC₅₀s = 7.4 and 10.1 μM,

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respectively), and it acts synergistically with daunorubicin to inhibit proliferation of HCT-8 cells that endogenously express ABCB1. Olomoucine also inhibits replication of herpes simplex virus 1 (HSV-1), HSV-2, vaccinia virus, human adenovirus type 4 (Ad4), and human CMV (IC_{50} s = 5, 4.7, 3.8, 2.4, and 3.2 μ M, respectively) but not measles virus or influenza virus (IC_{50} s = >20 μ M for both).³

- 1.Kryštof, V., McNae, I.W., Walkinshaw, M.D., et al.Antiproliferative activity of olomoucine II, a novel 2,6,9-trisubstituted purine cyclin-dependent kinase inhibitorCell Mol. Life Sci.62(15)1763-1771(2005)
- 2.Cihalova, D., Hofman, J., Ceckova, M., et al.Purvalanol A, olomoucine II and roscovitine inhibit ABCB1 transporter and synergistically potentiate cytotoxic effects of daunorubicin in vitroPLoS One8(12)e83467(2013)
- 3.Holcakova, J., Tomasec, P., Bugert, J.J., et al.The inhibitor of cyclin-dependent kinases, olomoucine II, exhibits potent antiviral propertiesAntivir. Chem. Chemother.20(3)133-142(2010)

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