Revision 4

Store at -20C

#9885

Roscovitine

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For Research Use Only. Not for Use in Diagnostic Procedures.

Background

Roscovitine is a cell permeable reversible selective inhibitor of cyclin-dependent kinases CDK1 (cdc2), CDK2 and CDK5 (1). A purine analog, this drug competes for the binding site of ATP in the catalytic cleft. Treatment of cultured cells with roscovitine can cause cell cycle arrest or apoptosis (1-4). The IC_{50} for cdc2 activity is 0.65 µM *in vitro* (1).

Molecular Formula

$C_{19}H_{28}N_6O$

Molecular Weight

354.45 g/mol

Purity

>99%

CAS

186692-46-6

Solubility

Soluble in DMSO and EtOH at 200mg/ml.

Storage

Store lyophilized or in solution at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

Directions for Use

Roscovitine [(R) stereoisomer] is supplied as a 1 mg powder. Store at or below -20°C. Before use, dissolve powder in 143 µl DMSO or MeOH to make a 20 mM stock solution. The suggested working concentration is 20 µM in tissue culture medium. Treat cells for 4-24 hours. Store solution at -20°C.

Background References

1. Meijer, L. et al. (1997) *Eur J Biochem* 243, 527-36.
2. Whittaker, S.R. et al. (2007) *Cell Cycle* 6, 3114-31.
3. Dey, A. et al. (2008) *Cell Death Differ* 15, 263-73.
4. Wojciechowski, J. et al. (2003) *Int J Cancer* 106, 486-95.