

# Roscovitine



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<b>Background</b>	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 <sub>50</sub> for cdc2 activity is 0.65 μM <i>in vitro</i> (1).
<b>Molecular Formula</b>	C <sub>19</sub> H <sub>28</sub> N <sub>6</sub> O
<b>Molecular Weight</b>	354.45 g/mol
<b>Purity</b>	>99%
<b>CAS</b>	186692-46-6
<b>Solubility</b>	Soluble in DMSO and EtOH at 200mg/ml.
<b>Storage</b>	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.
<b>Directions for Use</b>	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.
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Meijer, L. et al. (1997) <i>Eur J Biochem</i> 243, 527-36.</li> <li>2. Whittaker, S.R. et al. (2007) <i>Cell Cycle</i> 6, 3114-31.</li> <li>3. Dey, A. et al. (2008) <i>Cell Death Differ</i> 15, 263-73.</li> <li>4. Wojciechowski, J. et al. (2003) <i>Int J Cancer</i> 106, 486-95.</li> </ol>

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