

Roscovitine

1 mg

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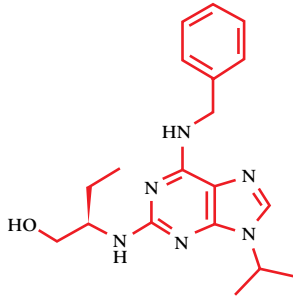
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For Research Use Only. Not For Use In Diagnostic Procedures.

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 $0.65 \mu\text{M}$ *in vitro* (1).

Molecular Formula: $C_{19}H_{28}N_6O$

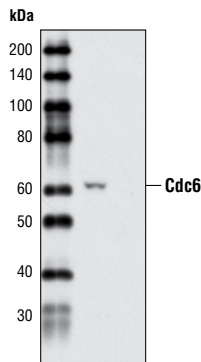


Molecular Weight: 354.46 g/mol

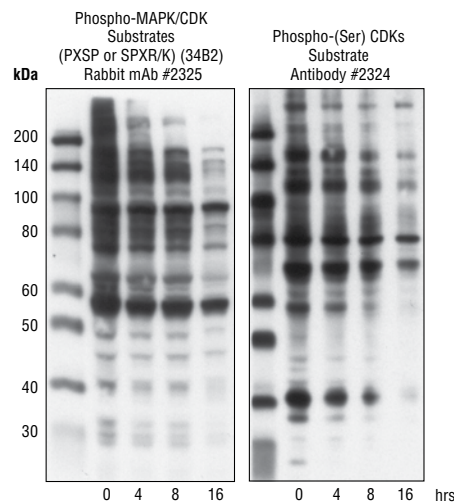
Directions for Use: Roscovitine [(R) stereoisomer] is supplied as 1 mg powder. Store at or below -20°C . Before use, dissolve powder in $143 \mu\text{l}$ DMSO or MeOH to make a 20 mM stock solution. The suggested working concentration is $20 \mu\text{M}$ in tissue culture medium. Treat cells for 4-24 hours depending on the individual experiment. Store solution at -20°C .

Background References:

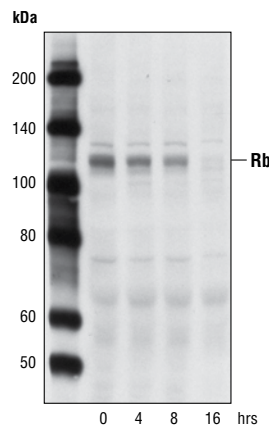
- (1) Meijer, L. et al. (1997) *Eur J Biochem* 243, 527-36.
- (2) Whittaker, S.R. et al. (2007) *Cell Cycle* 6, 3114-31.
- (3) Dey, A. et al. (2008) *Cell Death Differ* 15, 263-73.
- (4) Wojciechowski, J. et al. (2003) *Int J Cancer* 106, 486-95.



◀ Western blot analysis of extracts from U2OS cells, untreated or Roscovitine-treated (20 μM for 6 hours) using Cdc6 (C42F7) Rabbit mAb #3387.



Western blot analysis of extracts from HeLa cells treated with Roscovitine (20 μM) for the indicated times using Phospho-MAPK/CDK Substrates (PXSP or SPXR/K) (34B2) Rabbit mAb #2325 (left) or Phospho-(Ser) CDKs Substrate Antibody #2324 (right).



Western blot analysis of extracts from HeLa cells treated with Roscovitine (20 μM) for the indicated times using an antibody to Rb.

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.