

Roscovitine

(CYC202, Seliciclib®)

Cat. #: R-300

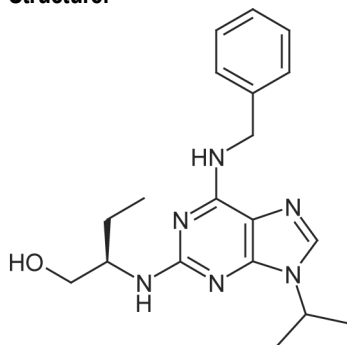
Source description: Synthetic.

M.W.: 354.46 daltons.

Purity: >99%.

Effective concentration: 1-100 μ M.

Structure:



Chemical name: 2-(R)-1-Ethyl-2-hydroxyethylamino)-6-benzylamino-9-isopropylpurine.

Molecular formula: C₁₉H₂₆N₆O.

CAS No.: 186692-46-6.

Activity: Roscovitine is an olomoucine-related purine flavopiridol. In contrast to Olomoucine, Roscovitine is a highly specific and strong inhibitor for the kinase activity of CDK1, CDK2, CDK5, and CDK7¹⁻³. Roscovitine arrests the cell cycle at G1, prevents proliferation and induces apoptosis in mammalian cells by inhibition of the CDK-STAT pathway⁴⁻⁷.

References:

1. Meijer, L. *et al.* (1997) *Eur. J. Biochem.* **243**, 527.
2. Hajdich, M. *et al.* (1999) *Adv. Exp. Med. Biol.* **457**, 341.
3. Mgbonyebi, O.P. *et al.* (1999) *Cancer Res.* **59**, 1903.
4. David-Pfeuty, T. (1999) *Oncogene* **18**, 7409.
5. Somerville, L. and Cory, J.G. (2000) *Anticancer Res.* **20**, 3347.
6. Lu, W. *et al.* (2001) *Oncogene* **20**, 3206.
7. Yakisich, J.S. *et al.* (1999) *Neuroreport.* **10**, 2563.

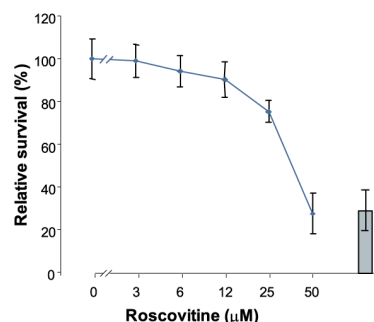
Sizes: 1 mg, 5 x 1 mg, 5 mg or 10 x 0.1 mg lyophilized powder.

Storage before reconstitution: Lyophilized powder can be stored intact at room temperature for several weeks. For longer periods, it should be stored at -20°C.

Reconstitution: DMSO or Methanol. Centrifuge all product preparations before use (10000 x g 5 min).

Storage and stability after reconstitution: Up to two weeks at 4°C or six months at -20°C.

Bioassay: Roscovitine prevents NGF-mediated survival of PC-12 cells.



Cells were grown in the absence of serum. The cells were not protected (dotted line) or protected (continuous line) from apoptosis with 100 ng/ml **mNGF 2.5S (Grade I)** (#N-240) and treated with different concentrations of **Roscovitine** (#R-300). Cell survival was measured after 4 days using the XTT method, calculated as a relative percentage of the control without Roscovitine and plotted against Roscovitine concentrations. The basal level of survival without NGF is represented by the gray column.

For research purposes only, not for human use.
Last Update: May, 2010.