

## Roscovotine

(CYC202, Seliciclib®)

Cat. #: R-300

Current Lot #: R300RC0101, R300RC011

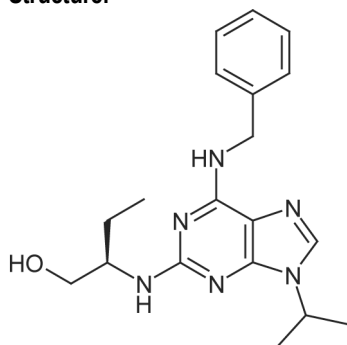
**Source description:** Synthetic.

**M.W.:** 354.46 daltons.

**Purity:** >99%.

**Effective concentration:** 1-100  $\mu$ M.

**Structure:**



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

**Molecular formula:** C<sub>19</sub>H<sub>26</sub>N<sub>6</sub>O.

**CAS No.:** 186692-46-6.

**Activity:** Roscovotine is an olomoucine-related purine flavopiridol. In contrast to Olomoucine, Roscovotine is a highly specific and strong inhibitor for the kinase activity of CDK1, CDK2, CDK5, and CDK7<sup>1-3</sup>. Roscovotine arrests the cell cycle at G1, prevents proliferation and induces apoptosis in mammalian cells by inhibition of the CDK-STAT pathway<sup>4-7</sup>.

### References:

1. Meijer, L. *et al.* (1997) *Eur. J. Biochem.* **243**, 527.
2. Hajduch, 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.

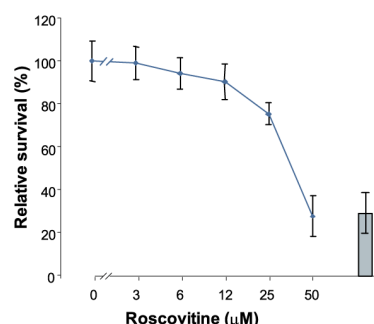
**Sizes:** 1 mg, 5 x 1 mg, 5 mg or 10 x 0.1 mg lyophilized powder.

**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:** Roscovotine 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 **Roscovotine** (#R-300). Cell survival was measured after 4 days using the XTT method, calculated as a relative percentage of the control without Roscovotine and plotted against Roscovotine 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.