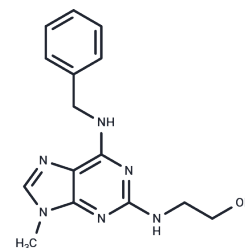


## Olomoucine

## Chemical Properties

CAS No. :	101622-51-9
Formula:	C <sub>15</sub> H <sub>18</sub> N <sub>6</sub> O
Molecular Weight:	298.34
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Olomoucine is an ATP-competitive inhibitor of Cdk2/cyclin A, Cdc2/CyclinB, CDK2/CyclinE, CDK5/p35, and ERK1/p44 MAP kinase with IC <sub>50</sub> s of 7, 7, 7, 3, and 25 μM, respectively. It regulates the cell cycle and exhibits anti-melanin tumor activities.
Targets(IC <sub>50</sub> )	ERK,CDK
In vitro	In Rdditapes oocytes, Olomoucine (0-150 μM) inhibits prophase/metaphase transition. In CTLL-2 cells, Olomoucine (0-1000 μM) inhibits DNA synthesis and triggers a G1 arrest similar to interleukin-2 deprivation. In NSCLC MB65 cells, Olomoucine (0-100 μM) inhibits G1/S transition[1]. Olomoucine inhibits tumor cell survival with IC <sub>50</sub> s of 32.35, 42.15, and 82.30 μM for dog, mouse B16, and human melanoma, respectively[4].
In vivo	In female Balb C– mice, Olomoucine results faster plasma concentration decreasing with 50 mg/kg (as single agent) than 16.6 mg/kg (as cassette)[3]. In dog with spontaneous melanoma, Olomoucine (8 mg/kg; i.v.) induces programmed cell death of cancer cells and results in rapid eradication of at least 68% of the tumor cells without side effects[4].

## Solubility Information

Solubility	DMSO: 50 mg/mL (167.59 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.7 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	3.3519 mL	16.7594 mL	33.5188 mL
5 mM	0.6704 mL	3.3519 mL	6.7038 mL
10 mM	0.3352 mL	1.6759 mL	3.3519 mL
50 mM	0.067 mL	0.3352 mL	0.6704 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Abraham, R.T., Acquarone, M., Andersen, A., et al. Cellular effects of olomoucine, an inhibitor of cyclin-dependent kinases. *Biology of the Cell* 83(2), 105-120 (1995).

Vesely, J., Havlicek, J., Strnad, M., et al. Inhibition of cyclin-dependent kinases by purine analogues. *European Journal of Biochemistry* 224, 771-786 (1994).

Raynaud FI, et al. Cassette dosing pharmacokinetics of a library of 2,6,9-trisubstituted purine cyclin-dependent kinase 2 inhibitors prepared by parallel synthesis. *Mol Cancer Ther.* 2004 Mar. 3(3):353-62.

Hajdúch M, et al. Induction of apoptosis and regression of spontaneous dog melanoma following in vivo application of synthetic cyclin-dependent kinase inhibitor olomoucine. *Anticancer Drugs.* 1997 Nov. 8(10):1007-13.

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