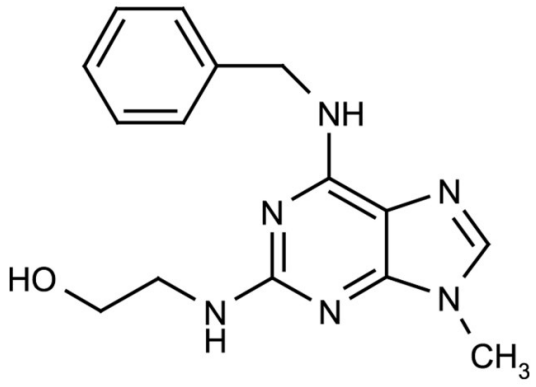
# Olomoucine (high purity)

## CDK/cyclin inhibitor

Olomoucine is a purine derivative which acts as a potent and selective inhibitor of CDK1 ($p34^{cdc2}$)/cyclin B and related kinases. It acts by competing for the ATP binding domain of the kinase. Of 35 protein kinases tested, olomoucine inhibited $p33^{CDK2}$/cyclin A, $p33^{CDK2}$/cyclin E, $p34^{cdc2}$ /cyclin B, $p33^{CDK5}$/p35 and erk1 with $IC_{50}$ of 7, 7, 7, 3 and 25μM respectively. The related kinases $p34^{CDK4}$/cyclin D and $p40^{CDK6}$/cyclin D3 were not inhibited or were less sensitive to olomoucine, $IC_{50}$ > 1000 and 250μM respectively. PKC, PKA, PKG, CaM kinase II, MLC kinase, CK2, EGFR tyrosine kinase, $p56^{lck}$, $p56^{lyn}$, $p60^{c\text{-}src}$, v-abl and insulin receptor tyrosine kinase are not inhibited or are weakly inhibited at 1mM. It delays mouse oocyte maturation and inhibits the growth of a variety of human cell lines including Rhabdomyosarcoma cell line Rh1, Rh18, Rh28 and Rh30; MCF-7, KB-3-1 and their adriamycin-resistant counterparts ($IC_{50}$=18-86μM). It inhibits DNA synthesis in interleukin-2-stimulated T lymphocytes and triggers a G1 arrest similar to interleukin-2 deprivation. Can be used to synchronize cells in G1. Triggers apoptosis in target tumor cells *in vitro* and *in vivo* and in maturing cerebellar granule neurons. $N^9$-Isopropyl-olomoucine and the negative control Iso-olomoucine are also available.

**Citations:** 8 View Online »

## Manuals, SDS & CofA View Online »


NH
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CH3

## Handling & Storage

| | |
|---|---|
| **Use/Stability** | As indicated on product label or CoA when stored as recommended. |
| **Long Term Storage** | -20°C |
| **Shipping** | Ambient Temperature |

## Regulatory Status

RUO - Research Use Only

## Product Details

| | |
|---|---|
| **Alternative Name** | 6-Benzylamino-2-(2-hydroxyethylamino)-9-methylpurine |
| **Appearance** | White to off-white solid. |
| **CAS** | 101622-51-9 |
| **Couple Target** | CDK, Erk |
| **Couple Type** | Inhibitor |
| **Formula** | $C_{15}H_{18}N_6O$ |
| **MW** | 298.4 |
| **Purity** | ≥98% |
| **Solubility** | Soluble in DMSO (32mg/ml), 100% ethanol (7mg/ml), or methanol. |

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