

# Olomoucine (high purity)

## CDK/cyclin inhibitor

Olomoucine is a purine derivative which acts as a potent and selective inhibitor of CDK1 (p34<sup>cdc2</sup>)/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<sup>CDK2</sup>/cyclin A, p33<sup>CDK2</sup>/cyclin E, p34<sup>cdc2</sup>/cyclin B, p33<sup>CDK5</sup>/p35 and erk1 with IC<sub>50</sub> of 7, 7, 7, 3 and 25μM respectively. The related kinases p34<sup>CDK4</sup>/cyclin D and p40<sup>CDK6</sup>/cyclin D3 were not inhibited or were less sensitive to olomoucine, IC<sub>50</sub> > 1000 and 250μM respectively. PKC, PKA, PKG, CaM kinase II, MLC kinase, CK2, EGFR tyrosine kinase, p56<sup>lck</sup>, p56<sup>lyn</sup>, p60<sup>c-src</sup>, 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<sub>50</sub>=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<sup>9</sup>-Isopropyl-olomoucine and the negative control Iso-olomoucine are also available.

Citations: 8

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## Ordering Information

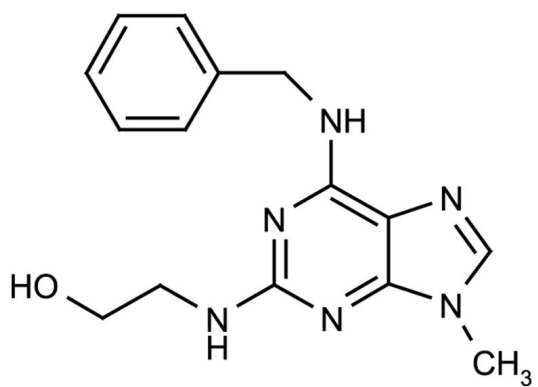
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ALX-350-013-M025

25mg

## Manuals, SDS & CofA

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## 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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