

Olomoucine (high purity)

CDK/cyclin inhibitor

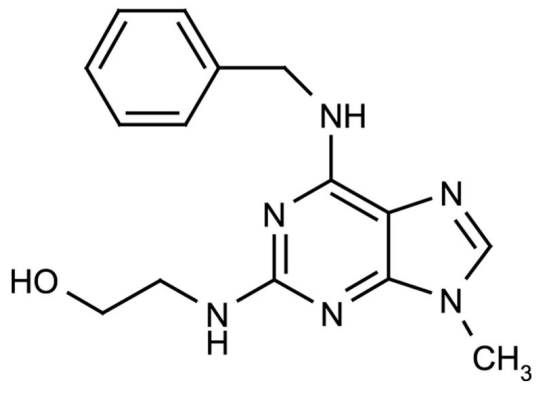
Olomoucine is a purine derivative which acts as a potent and selective inhibitor of CDK1 (p34^{cdc2})/cyclin B and related kinases. It acts by competing for the ATP binding domain of the kinase. Of 35 protein kinases tested, olomoucine inhibited p33^{CDK2}/cyclin A, p33^{CDK2}/cyclin E, p34^{cdc2}/cyclin B, p33^{CDK5}/p35 and erk1 with IC₅₀ 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, IC₅₀ > 1000 and 250μM respectively. PKC, PKA, PKG, CaM kinase II, MLC kinase, CK2, EGFR tyrosine kinase, p56^{lck}, p56^{lyn}, p60^{c-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 (IC₅₀=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. N⁹-Isopropyl-olomoucine and the negative control Iso-olomoucine are also available.

Citations: 8

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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.

Last modified: May 29, 2024



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