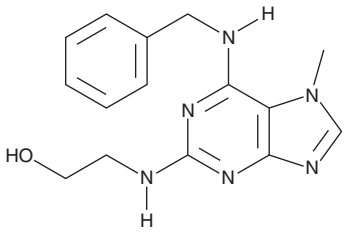
PRODUCT INFORMATION

Iso-Olomoucine

Item No. 13325

CAS Registry No.:	101622-50-8
Formal Name:	2-[[7-methyl-6-[(phenylmethyl) amino]-7H-purin-2-yl]amino]-ethanol
MF:	$C_{15}H_{18}N_6O$
FW:	298.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 210, 304 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Iso-olomoucine is supplied as a crystalline solid. A stock solution may be made by dissolving the iso-olomoucine in the solvent of choice, which should be purged with an inert gas. Iso-olomoucine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of iso-olomoucine in these solvents is approximately 0.3, 20, and 15 mg/ml, respectively.

Iso-olomoucine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, iso-olomoucine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Iso-olomoucine has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cyclin-dependent kinases (CDKs) are key regulators of cell cycle progression whose function/dysfunction has been implicated in cancer, a subset of human neurodegenerative diseases, and the reward response of addictive drugs *via* alteration of postsynaptic dopamine receptor signaling. Iso-olomoucine is an inactive stereoisomer of the Cdk5 inhibitor olomoucine. Because iso-olomoucine lacks activity at Cdk5 (IC_{50} ≥ 1 mM)[1], it may have utility as a control compound for determining Cdk5 specificity.[2-4] In a Cdk5-independent manner, iso-olomoucine has been shown to rapidly inhibit dopamine transporter activity in rat dorsal striatal synaptosomes with a potency similar to that of olomoucine(IC_{50} ~37 µM).

References

1. Veselý, J., Havlicek, J., Strnad, M., *et al*. Inhibition of cyclin-dependent kinases by purine analogues. *Eur. J. Biochem*. **224**, 771-786 (1994).
2. Price, D.A., Sorkin, A., and Zahniser, N.R. Cyclin-dependent kinase 5 inhibitors: Inhibition of dopamine transporter activity. *Mol. Pharmacol*. **76(4)**, 812-823 (2009).
3. Taylor, J.R., Lynch, W.J., Sanchez, H., *et al*. Inhibition of Cdk5 in the nucleus accumbens enhances the locomotor-activating and incentive-motivational effects of cocaine. *Proc. Natl. Acad. Sci. USA* **104(10)**, 4147-4152 (2007).
4. Fletcher, A.I., Shuang, R., Giocannucci, D.R., *et al*. Regulation of exocytosis by cyclin-dependent kinase 5 *via* phosphorylation of Munc18. *J. Biol. Chem*. **274(7)**, 4027-4035 (1999).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM