

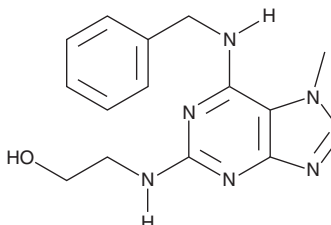
PRODUCT INFORMATION



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: C₁₅H₁₈N₆O
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 (IC₅₀ ≥ 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 (IC₅₀ ~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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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