Product Data Sheet

Chemical Properties

Product Name: Olomoucine
Cas No.: 101622-51-9
M.Wt: 298.3
Formula: C15H18N6O

Chemical Name: 2-[[9-methyl-6-[(phenylmethyl)amino]-9H-purin-2-yl]amino]-ethanol
Canonical SMILES: OCCNc1nc(NCc2cccc2)c2ncn(C)c2n1
Solubility: ≤10mg/ml in ethanol; 20mg/ml in DMSO; 30mg/ml in dimethyl formamide
Storage: Store at -20°C
General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Cell Cycle/Checkpoint
Pathways: Cyclin-Dependent Kinases

Description:

Olomoucine is an ATP-competitive CDK inhibitor [1].

Cyclin-dependent kinases (CDKs) play important roles in the regulation of the cell division cycle and are therefore promising targets for cancer therapy [1].
Olomoucine is an ATP-competitive CDK inhibitor with IC50 values of 7, 7, 7, 3 and 25 μM against CDC2/cyclin B, Cdk2/cyclin A and Cdk2/cyclin E kinases, the brain CDK5/p35 kinase and the ERK1/p44 MAP kinase, respectively [1]. In metaphase-arrested Xenopus egg extracts, Olomoucine inhibited M-phase-promoting factor activity. Olomoucine provided an anti-mitotic reagent that might preferentially inhibit certain steps of the cell cycle [1]. In interleukin-2-stimulated T lymphocytes (CTLL-2 cells), Olomoucine inhibited DNA synthesis and caused G1 arrest [2].

In rats after after spinal cord injury (SCI), olomoucine attenuated astrogial proliferation and glial scar formation, decreased lesion cavity and mitigated functional deficits. In rats following SCI, olomoucine significantly decreased the spinal cord edema formation, suppressed microglial proliferation and attenuated production of proinflammatory cytokines in the traumatic spinal cord. Olomoucine also attenuated neuronal cell death [3].

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

ApexBio Technology

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