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PRODUCT INFORMATION



1-Azakenpaullone

Item No. 16733

CAS Registry No.: 676596-65-9

Formal Name: 9-bromo-7,12-dihydro-pyrido[3',2':2,3]azepino[4,5-b]indol-6(5H)-one

MF: C₁₅H₁₀BrN₃O

FW: 328.2

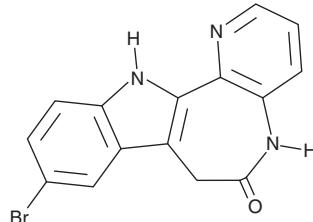
Purity: ≥98%

UV/Vis.: λ_{max}: 221, 334 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

1-Azakenpaullone is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-azakenpaullone in the solvent of choice. 1-Azakenpaullone is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of 1-azakenpaullone in these solvents is approximately 10 and 3 mg/ml, respectively.

1-Azakenpaullone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1-azakenpaullone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 1-Azakenpaullone has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

1-Azakenpaullone is an analog of kenpaullone (Item No. 10010239) that inhibits glycogen synthase kinase 3β (GSK3β) more potently (IC_{50} = 18 nM) than CDK1/cyclin B or CDK5/p25 (IC_{50} s = 2.0 and 4.2 μM, respectively).¹ Through its effects on GSK3β, 1-azakenpaullone stimulates the proliferation of human pancreatic islets and drives the differentiation of mouse embryonic stem cells and *Nematostella* larvae.²⁻⁴

References

1. Kunick, C., Lauenroth, K., Leost, M., et al. 1-Azakenpaullone is a selective inhibitor of glycogen synthase kinase-3β. *Bioorg. Med. Chem. Lett.* **14**(2), 413-416 (2004).
2. Liu, H., Remedi, M.S., Pappan, K.L., et al. Glycogen synthase kinase-3 and mammalian target of rapamycin pathways contribute to DNA synthesis, cell cycle progression, and proliferation in human islets. *Diabetes* **58**(3), 663-672 (2009).
3. Mfopou, J.K., Geeraerts, M., Dejene, R., et al. Efficient definitive endoderm induction from mouse embryonic stem cell adherent cultures: A rapid screening model for differentiation studies. *Stem Cell Res.* **12**(1), 166-177 (2014).
4. Marlow, H., Matus, D.Q., and Martindale, M.Q. Ectopic activation of the canonical wnt signaling pathway affects ectodermal patterning along the primary axis during larval development in the anthozoan *Nematostella vectensis*. *Dev. Biol.* **380**(2), 324-334 (2013).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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