

Small Molecules

1-Azakenpauillone

Inhibits glycogen synthase kinase 3 β (GSK3 β)

Catalog # 74252

5 mg



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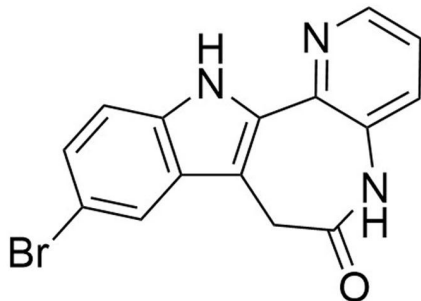
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Product Description

1-Azakenpauillone is a potent and highly selective inhibitor of glycogen synthase kinase 3 β (IC₅₀ = 18 nM) and is highly preferential to GSK3 β versus other cyclin-dependent kinases (CDKs) including CDK/cyclin B and CDK5/p25 (IC₅₀ = 2 μ M and 4.2 μ M, respectively; Kunick et al.).

Molecular Name:	1-Azakenpauillone
Alternative Names:	Not applicable
CAS Number:	676596-65-9
Chemical Formula:	C ₁₅ H ₁₀ BrN ₃ O
Molecular Weight:	328.2 g/mol
Purity:	≥ 98%
Chemical Name:	9-bromo-7,12-dihydro-pyrido[3',2':2,3]azepino[4,5-b]indol-6(5H)-one
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage, store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	· DMSO ≤ 30 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 305 μ L of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

MAINTENANCE AND SELF-RENEWAL

· In combination with ID-8 (Catalog #72502) and FK506 (Catalog #74152), supports human pluripotent stem cells in long-term propagation, maintaining pluripotency, and capacity to differentiate (Yasuda et al.).

References

Kunick C et al. (2004) 1-Azakenpaullone is a selective inhibitor of glycogen synthase kinase-3 beta. *Bioorg Med Chem Lett* 14(2): 413–6.
Yasuda S et al. (2018) Chemically defined and growth-factor-free culture system for the expansion and derivation of human pluripotent stem cells. *Nat Biomed Eng* 2(3): 173–82.

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