bio-techne
TOCRIS

Print Date: Apr 30th 2026

Certificate of Analysis

www.tocris.com

Product Name: **1-Azakenpaullone** **Catalog No.: 3673** **Batch No.: 1**

CAS Number: 676596-65-9

IUPAC Name: 9-Bromo-7,12-dihydropyrido[3',2':2,3]azepino[4,5-*b*]indol-6(5*H*)-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{10}BrN_3O$

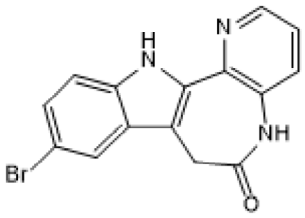
Batch Molecular Weight: 328.17

Physical Appearance: Grey solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.1% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	54.9	3.07	12.8
Found	54.06	3.04	12.38

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Description:

1-Azakenpaullone is a potent and selective inhibitor of glycogen synthase kinase 3 (GSK-3), with IC_{50} = 18 nM. It displays selectivity index (SI) of 111 and 233 over CDK1 and CDK5, respectively. 1-Azakenpaullone stimulates growth and replication of β-cells in vitro (rat islets) and alleviates glucolipotoxicity in INS-1 β-cells. It displays mitogenic effects on rat β-cells comparable with those of incretin hormone GIP. In combination with TTNPB (Cat. No. 0761) and WS 6 (Cat. No. 7791), 1-Azakenpaullone can be part of a chemical cocktail used for induction and long-term maintainance in vitro of totipotent stem cells (TotiSCs) f... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

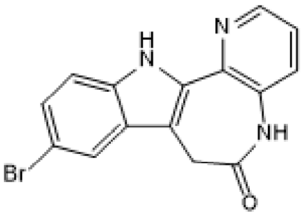
Batch Molecular Formula: $C_{15}H_{10}BrN_3O$

Batch Molecular Weight: 328.17

Physical Appearance: Grey solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Hu *et al* (2023) Induction of mouse totipotent stem cells by a defined chemical cocktail. Nature ***617*** 792. PMID: 35728625.

Mussmann *et al* (2007) Inhibition of GSK3 promotes replication and survival of pancreatic beta cells. J.Biol.Chem. ***282*** 12030. PMID: 17242403.

Kunick *et al* (2004) 1-Azakenpaullone is a selective inhibitor of glycogen synthase kinase-3β. Bioorg.Med.Chem.Lett. ***14*** 413. PMID: 14698171.

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