

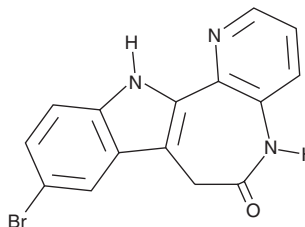
# PRODUCT INFORMATION



## 1-Azakenpallone

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:** C<sub>15</sub>H<sub>10</sub>BrN<sub>3</sub>O  
**FW:** 328.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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-Azakenpallone is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-azakenpallone in the solvent of choice. 1-Azakenpallone is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of 1-azakenpallone in these solvents is approximately 10 and 3 mg/ml, respectively.

1-Azakenpallone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1-azakenpallone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 1-Azakenpallone 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-Azakenpallone is an analog of kenpallone (Item No. 10010239) that inhibits glycogen synthase kinase 3β (GSK3β) more potently (IC<sub>50</sub> = 18 nM) than CDK1/cyclin B or CDK5/p25 (IC<sub>50</sub>s = 2.0 and 4.2 μM, respectively).<sup>1</sup> Through its effects on GSK3β, 1-azakenpallone stimulates the proliferation of human pancreatic islets and drives the differentiation of mouse embryonic stem cells and *Nematostella* larvae.<sup>2-4</sup>

### References

1. Kunick, C., Lauenroth, K., Leost, M., *et al.* 1-Azakenpallone 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.

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