

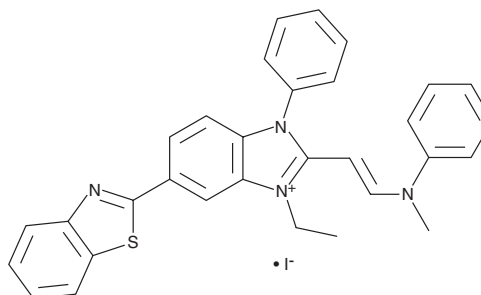
PRODUCT INFORMATION



Akt Inhibitor IV

Item No. 15569

CAS Registry No.: 681281-88-9
Formal Name: 6-(2-benzothiazolyl)-1-ethyl-2-[2-(methylphenylamino)ethenyl]-3-phenyl-1H-benzimidazolium, monoiodide
MF: C₃₁H₂₇N₄S • I
FW: 614.6
Purity: ≥95%
UV/Vis.: λ_{max}: 386 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Akt inhibitor IV is supplied as a crystalline solid. A stock solution may be made by dissolving the Akt inhibitor IV in the solvent of choice. Akt inhibitor IV is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of Akt inhibitor IV in these solvents is approximately 30 mg/ml.

Description

Akt inhibitor IV is an inhibitor of Akt activation that inhibits Akt-mediated nuclear export of Forkhead box class O transcription factor 1a (FOXO1a; IC₅₀ = 625 nM) and reduces phosphorylation of Akt at Ser⁴⁷³ and Thr³⁰⁸ in a dose-dependent manner.¹ Akt inhibitor IV inhibits replication of parainfluenza virus 5 (PIV5) in HeLa cells (IC₅₀ = 520 nM).² It also reduces the growth of cancer cells (IC₅₀ = 0.3 μM for both Jurkat and HeLa cells) via a reduction in mitochondrial polarization and increased production of reactive oxygen species (ROS).³

References

1. Kau, T.R., Schoeder, F., Ramaswamy, S., *et al.* A chemical genetic screen identifies inhibitors of regulated nuclear export of a Forkhead transcription factor in PTEN-deficient tumor cells. *Cancer Cell.* **4(6)**, 463-476 (2003).
2. Sun, Q., Wu, R., Cai, S., *et al.* Synthesis and biological evaluation of analogues of AKT (protein kinase B) inhibitor-IV. *J. Med Chem.* **54(5)**, 1126-1139 (2011).
3. Meinig, J.M. and Peterson, B.R. Anticancer/antiviral agent Akt inhibitor-IV massively accumulates in mitochondria and potently disrupts cellular bioenergetics. *ACS Chem Biol.* **10(2)**, 570-576 (2015).

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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