

PRODUCT INFORMATION



KT 5720

Item No. 10011011

CAS Registry No.: 108068-98-0
Formal Name: 2,3,9,10,11,13-hexahydro-10S-hydroxy-9-methyl-1-oxo-9R,12S-epoxy-1H-diindolo[1,2,3-fg:3',2',1'-k]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, hexyl ester

MF: C₃₂H₃₁N₃O₅

FW: 537.6

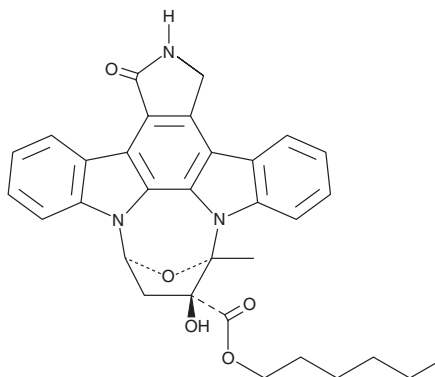
Purity: ≥98%

Supplied as: A clear film

Storage: -20°C

Stability: ≥4 years

Item Origin: Bacterium/*Nocardiosis* sp.



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

Laboratory Procedures

KT 5720 is supplied as a clear film. A stock solution may be made by dissolving the KT 5720 in the solvent of choice, which should be purged with an inert gas. KT 5720 is soluble in the organic solvent methanol at a concentration of approximately 5 mg/ml.

Description

Protein kinase A (PKA) regulates multiple signal transduction events *via* protein phosphorylation and is integral to all cellular responses involving the cyclic AMP second messenger system. KT 5720 is one of a family of compounds synthesized by the fungus *Nocardiosis* sp. It blocks PKA signaling through competitive inhibition of ATP with a K_i value of 60 nM.¹ Reported IC₅₀ values vary widely depending upon ATP concentration tested and can range from 56 nM (low ATP) to 3 μM (physiologic ATP).^{2,3} Non-specific effects of KT 5720 include inhibition of phosphorylase kinase, PDK1, MEK, MSK1, PKBα, and GSK3β at concentrations as effective as or more potent than that for inhibition of PKA.^{2,3}

References

1. Kase, H., Iwahashi, K., Nakanishi, S., *et al.* K-252 compounds, novel and potent inhibitors of protein kinase C and cyclic nucleotide-dependent protein kinases. *Biochem. Biophys. Res. Commun.* **142**(2), 436-440 (1987).
2. Davis, S.P., Reddy, H., Caivano, M., *et al.* Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem J.* **351**(1), 95-105 (2000).
3. Murray, A.J. Pharmacological PKA inhibition: All may not be what it seems. *Science Signaling* **1**(22) (2008).

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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