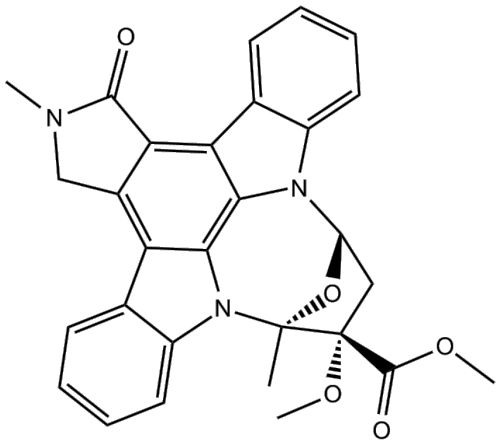
Product Data Sheet

Product Name: KT 5823
Cat. No.: GC17346

Chemical Properties

Cas. No.	126643-37-6		
Chemical Name	(5S,6S,8S)-methyl 6-methoxy-5,14-dimethyl-13-oxo-6,7,8,13,14,15-hexahydro-5H-16-oxa-4b,8a,14-triaza-5,8-methanodibenzo[b,h]cycloocta[jkl]cyclopenta[e]-as-indacene-6-carboxylate		
SMILES	O=C([C@@]([C@]1(C)O[C@@H]2N3C4=C5N1C6=CC=CC=C6C5=C(CN(C)C7=O)C7=C4C8=CC=CC=C38)(C2)OC)OC		
Formula	$C_{29}H_{25}N_3O_5$	M.Wt	495.53
Solubility	1mg/mL in ethyl acetate or 20mg/mL in DMSO	Storage	Desiccate at -20°C,Protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

The activity of cGMP-dependent protein kinase (PKG) is controlled by factors that elevate cellular

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cGMP, like nitric oxide (NO), and by those that reduce cGMP levels, like certain phosphodiesterases. KT 5823 is a potent, selective inhibitor of cGMP-dependent protein kinase (PKG) (in vitro IC50 = 234 nM).1 KT 5823 is cell-permeable and is often used in intact cells to assess the role of PKG in signaling, although there are cases where it poorly inhibits PKG in cells.[2] KT 5823 is a weak inhibitor of PKC (Ki = 4 µM) and PKA (Ki >10 µM).[1]

Reference:

[1]. Hidaka, H., and Kobayashi, R. Pharmacology of protein kinase inhibitors. Annu. Rev. Pharmacol. Toxicol. 32, 377-397 (1992).
[2]. Burkhardt, M., Glazova, M., Gambaryan, S., et al. KT5823 inhibits cGMP-dependent protein kinase activity in vitro but not in intact human platelets and rat mesangial cells. J. Biol. Chem. 275(43), 33536-33541 (2000).

Caution: Product has not been fully validated for medical applications. For research use only.
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