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DATASHEET

KT 5823

Product overview

Name	KT 5823
Cat No	HB1316
Biological action	Inhibitor
Purity	>98%
Description	Potent, selective PKG inhibitor

Biological Data

Biological description	Potent and selective protein kinase G (PKG) inhibitor (K_i = 0.234 µM). Exhibits selectivity for PKG over PKA and PKC (K_i values are >10.0 and 4.0 µM for PKA and PKC respectively). Arrests cell cycle at G_O/G_1 boundary and also modulates Na^+/I^- symporter (NIS). Displays pro-apoptotic properties.

Solubility & Handling

Storage instructions	-20°C (desiccate)
Solubility overview	Soluble in DMSO (50mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	(9*S*,10*R*,12*R*)-2,3,9,10,11,12-Hexahyd ro-10-methoxy-2,9-dimethyl-1-oxo-9,12-epoxy-1*H*-dii ndolo[1,2,3-*fg*:3',2',1'-*kl*]pyrrolo[3,4-*i*][1,6]benzodi azocine-10-carboxylic acid, methyl ester
Molecular Weight	495.53
Chemical structure	
Molecular Formula	$C_{29}H_{25}N_3O_5$
CAS Number	126643-37-6
PubChem identifier	108152
SMILES	[H][C@]18O[C@](N6C4=C3N1C2=CC=CC=C2C3=C7C(CN(C7=O)C)=C4C5=CC=CC=C56)([C@]([C@@](OC)=O)(OC)C8)C
InChiKey	QTYMDECKVKSGSM-YMUMJAELSA-N

References

Multiple kinase arrest points in the G1 phase of nontransformed mammalian cells are absent in transformed cells.

Gadbois DM *et al* (1992) Proc Natl Acad Sci U S A 89(18)
PubMedID 1528872

KT5823 differentially modulates sodium iodide symporter expression, activity, and glycosylation between thyroid and breast cancer cells.

Beyer S *et al* (2011) Endocrinology 152(3)
PubMedID 21209020

Guanylyl cyclase inhibitors NS2028 and ODQ and protein kinase G (PKG) inhibitor KT5823 trigger apoptotic DNA fragmentation in immortalized uterine epithelial cells: anti-apoptotic effects of basal cGMP/PKG.

Chan SL *et al* (2003) Mol Hum Reprod 9(12)
PubMedID 14614039