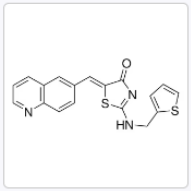

SML0569 ▶ Sigma-Aldrich.

RO-3306

☆☆☆☆☆ (0) Write a review

≥98% (HPLC)

Synonym(s):
(5Z)-5-Quinolin-6-ylmethylene-2-[(thiophen-2-ylmethyl)-amino]-thiazol-4-one, 5-(6-Quinolinylmethylene)-2-[(2-thienylmethyl)amino]-4(5H)-thiazolone

Empirical Formula (Hill Notation):
$C_{18}H_{13}N_3OS_2$

CAS Number:	872573-93-8	Molecular Weight:	351.45	MDL number:	MFCD17392573
PubChem Substance ID:	329825559	NACRES:	NA.77		

All Photos (3)

Documents

SDS

COO/COA

PROPERTIES

Quality Level	100
Assay	≥98% (HPLC)
form	powder
color	off-white to brown
solubility	DMSO: 5 mg/mL, clear
storage temp.	2-8°C
SMILES string	O=C1N=C(NCC2=CC=CS2)S/C1=C\C3=CC4=C(C=C3)N=CC=C4
InChI	1S/C18H13N3OS2/c22-17-16(24-18(21-17)20-11-14-4-2-8-23-14)10-12-5-6-15-13(9-12)3-1-7-19-15/h1-10H,11H2,(H,20,21,22)/b16-10-
InChI key	XOLMRFUGOINFDQ-YBEGLDIGSA-N

DESCRIPTION

Application

RO-3306 has been used:

- To study the significance of CA4-mediated cytotoxicity in mitotic arrest[1]
- In cell cycle synchronization to conduct a study on proteomics[2]
- As a CDK1 inhibitor, to prevent early mitotic entry[3]

Biochem/physiol Actions

CDK1 (cyclin dependent kinase 1) is considered to be the “master switch” in cell division, which maintains the mitotic state of cells.[4]

RO-3306 is a selective ATP-competitive inhibitor of CDK1. It inhibites CDK1 cyclin B1 activity with Ki of 35 nM, nearly 10-fold selectivity relative to CDK2/cyclin E and over 50-fold relative to CDK4/cyclin D. RO-3306 has been used to cause cell cycle arrest at the G2/M boundary.