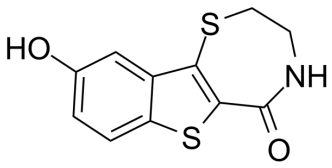
kb NB 142-70

Cat. No.:	HY-15528
CAS No.:	1233533-04-4
Molecular Formula:	$C_{11}H_9NO_2S_2$
Molecular Weight:	251.32
Target:	PKD
Pathway:	Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 46.67 mg/mL (185.70 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.9790 mL	19.8950 mL	39.7899 mL
	5 mM	0.7958 mL	3.9790 mL	7.9580 mL
	10 mM	0.3979 mL	1.9895 mL	3.9790 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3.5 mg/mL (13.93 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.5 mg/mL (13.93 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

kb NB 142-70 is a potent PKD inhibitor, with IC_{50}s of 28.3, 58.7 and 53.2 nM for PKD1, PKD2, and PKD3, respectively. kb NB 142-70 also has antitumor activity.

IC_{50} & Target

PKD1	PKD3	PKD2
28.3 nM (IC_{50})	53.2 nM (IC_{50})	58.7 nM (IC_{50})

In Vitro

kb NB 142-70 is a potent PKD inhibitor, with IC_{50}s of 28.3, 58.7 and 53.2 nM for PKD1, PKD2, and PKD3, respectively. kb NB 142-70 also inhibits Ser^{916} phosphorylation of PKD1 (IC_{50}, 2.2 ± 0.6 μM) in LNCaP cells. Moreover, kb NB 142-70 is cytotoxic against PC3 cells with an EC_{50} of 8.025 μM[1]. kb NB 142-70 (0-5 μM) concentration-dependently prevents ANG II-induced phosphorylation of HDAC4 at Ser^{246} and Ser^{632}, HDAC5 at Ser^{259} and Ser^{498}, and HDAC7 at Ser^{155} in IEC-18 cells. In addition,

kb NB 142-70 (3.5 μM) also suppresses HDAC4, HDAC5, and HDAC7 phosphorylation in IEC-18 cells stimulated with ANG II for 0-240 min or with vasopressin, lysophosphatidic acid (LPA), or phorbol 12,13-dibutyrate (PDBu)[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]

Briefly, PC3 cells are treated with kb NB 142-70 at 10 μM concentration for 48 h, and then fixed in 70% ice-cold ethanol overnight and labeled with propidium iodide. The labeled cells are analyzed using a FACScan Benchtop Cytometer[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Lavalle CR, et al. Novel protein kinase D inhibitors cause potent arrest in prostate cancer cell growth and motility. BMC Chem Biol. 2010 May 5;10:5.

[2]. James Sinnett-Smith, et al. Protein kinase D1 mediates class IIa histone deacetylase phosphorylation and nuclear extrusion in intestinal epithelial cells: role in mitogenic signaling. Am J Physiol Cell Physiol. 2014 May 15; 306(10): C961-C971.

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