KN-92 phosphate

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Cat. No.:	HY-15517A	0
CAS No.:	1135280-28-2	
Molecular Formula:	C ₂₄ H ₂₈ ClN ₂ O ₇ PS	
Molecular Weight:	554.98	0=\$=0
Target:	Others	
Pathway:	Others	
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months: -20°C, 1 month (sealed storage, away from moisture)	о Но ^{_P} он

SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (90.09 mM; Need ultrasonic) H ₂ O : < 0.1 mg/mL (ultrasonic) (insoluble)						
	Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg		
		1 mM	1.8019 mL	9.0093 mL	18.0187 mL		
		5 mM	0.3604 mL	1.8019 mL	3.6037 mL		
		10 mM	0.1802 mL	0.9009 mL	1.8019 mL		
	Please refer to the solubility information to select the appropriate solvent.						
In Vivo	 Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.50 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 2.5 mg/mL (4.50 mM); Clear solution; Need ultrasonic 						

DIOLOGICALACITY				
Description	KN-92 phosphate is an inactive derivative of KN-93, without CaM kinase inhibitory activity. KN-92 phosphate is intended to be used as a control compound in studies designed to elucidate the antagonist activities of KN-93. KN-93 is a cell-permeable, reversible and competitive CaMKII inhibitor ^{[1][2]} .			
In Vitro	 KN-93 (5-50 μM; 24 hours) inhibits LX-2 cell growth and KN-92 (5-50μM; 24 hours) is ineffective in blocking cell growth^[2]. The analysis of cell cycle regulator expression reveals that KN-93 rather than KN-92 reduced the expression of p53 and p21^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay^[2] 			

Cell Line:	Human hepatic stellate cells (LX-2)
Concentration:	5-50 μΜ
Incubation Time:	24 hours
Result:	Ineffective in blocking cell growth.

CUSTOMER VALIDATION

- J Mol Cell Cardiol. 2021 Nov 10;S0022-2828(21)00210-8.
- Sci Rep. 2023 Dec 7;13(1):21712.
- Cell Calcium. 2021 Oct 5;100:102483.
- J Endocrinol. 2018 Mar;236(3):151-165.
- Nat Metab. 2020 Sep;2(9):918-933.

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REFERENCES

[1]. Smyth JT, et al. Inhibition of the inositol trisphosphate receptor of mouse eggs and A7r5 cells by KN-93 via a mechanism unrelated to Ca2+/calmodulin-dependent protein kinase II antagonism. J Biol Chem. 2002;277(38):35061-35070.

[2]. An P, et al. KN-93, a specific inhibitor of CaMKII inhibits human hepatic stellate cell proliferation in vitro. World J Gastroenterol. 2007;13(9):1445-1448.

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

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