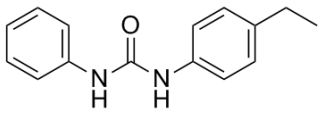
INH14

Cat. No.:	HY-114454		
CAS No.:	200134-22-1		
Molecular Formula:	$C_{15}H_{16}N_2O$		
Molecular Weight:	240.3		
Target:	IKK		
Pathway:	NF-κB		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



Solvent & Solubility

In Vitro

DMSO : ≥ 125 mg/mL (520.18 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	4.1615 mL	20.8073 mL	41.6146 mL
	5 mM	0.8323 mL	4.1615 mL	8.3229 mL
	10 mM	0.4161 mL	2.0807 mL	4.1615 mL

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

In Vivo

1. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.08 mg/mL (8.66 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 2.08 mg/mL (8.66 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

INH14 is a cell permeable inhibitor of **IKKα/IKKβ**, with **IC_{50}**s of 8.97 and 3.59 μM, respectively. INH14 inhibits the IKK α/β-dependent **TLR** inflammatory response. INH14 also inhibits downstream of TAK1/TAB1 and NF-kB pathways. Anti-inflammatory and anti-cancer activity[1].

IC_{50} & Target	IKKβ	IKKα
	3.59 μM (IC_{50})	8.97 μM (IC_{50})

In Vivo	INH14 (5 μg/g, i.p. for 2 hours) reduces lipopeptide-induced inflammation in mice[1].	
	Animal Model:	8-week old, male, pathogen-free C57BL/6J mice[1]
	Dosage:	5 μg/g, one hour before Pam2CSK4 injection
	Administration:	I.P. for 2 hours
	Result:	Decreased TNFα production in mice.

REFERENCES

[1]. Drexel M, et al. INH14, a Small-Molecule Urea Derivative, Inhibits the IKKα/β-Dependent TLR Inflammatory Response. Chembiochem. 2019 Mar 1;20(5):710-717.

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