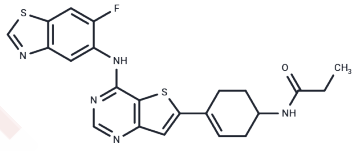
Data Sheet (Cat.No.T211556)

TargetMol

RIPK2-IN-8

Chemical Properties



CAS No. : 3036254-29-9

Formula: C22H20FN5OS2

Molecular Weight: 453.56

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	RIPK2-IN-8 is an orally active and highly selective RIPK2 inhibitor with an IC50 of 11 nM. It exhibits greater selectivity for RIPK2 over RIPK1 (IC50 > 30,000 nM) and has moderate inhibitory effects on RIPK3 (IC50 = 44.61 nM). RIPK2-IN-8 exerts anti-inflammatory effects by inhibiting the NOD2-RIPK2 signaling pathway and the expression of inflammatory cytokines IL-6 and TNFα. Additionally, in models of acute liver injury (ALI), RIPK2-IN-8 demonstrates both anti-inflammatory and hepatoprotective effects, making it useful for ALI research.
Targets(IC50)	NF-κB,Interleukin,p38 MAPK,RIP kinase
In vitro	RIPK2-IN-8 (Compound HY3) at concentrations of 0-10 μM for 0.5-6 hours, delays the activation of NF-kB and MAPK in L18-MDP stimulated THP-1 cells without affecting protein expression or cell viability. At 1 μM, RIPK2-IN-8 exhibits minimal inhibitory activity against inflammation-related kinases such as BTK, FLT3, JNK2α2, SAPK3, MSK1, and MAPKAP-K2. It shows low cytotoxicity in H9C2 cells with an IC50 greater than 40 μM. Additionally, RIPK2-IN-8 inhibits IL-8 production in MDP-stimulated THP-1 cells, with an IC50 of 29 nM.
In vivo	RIPK2-IN-8 (Compound HY3) [7.5-30 mg/kg, orally, single dose] suppresses RIPK2 kinase activity in an MDP-induced peritonitis mouse model, which in turn blocks the activation of downstream inflammatory signaling and subsequently affects the synthesis and release of cytokine IL-6. Additionally, RIPK2-IN-8 [5-20 mg/kg, orally, single dose] demonstrates hepatoprotective effects in an Acetaminophen (APAP)-induced acute liver injury (ALI) model by inhibiting the expression of inflammatory cytokines, thereby reducing serum inflammatory markers and mitigating liver damage.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2048 mL	11.0239 mL	22.0478 mL
5 mM	0.441 mL	2.2048 mL	4.4096 mL
10 mM	0.2205 mL	1.1024 mL	2.2048 mL
50 mM	0.0441 mL	0.2205 mL	0.441 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.