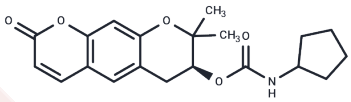
Data Sheet (Cat.No.T86065)

TargetMol

CGK012

Chemical Properties



CAS No. : 2044497-76-7

Formula: C20H23NO5

Molecular Weight: 357.40

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	CKG012 is an inhibitor of the Wnt/β-catenin signaling pathway that inhibits the release of HMGB1 and the transcription of β-catenin. It exhibits attenuating activities against cecal ligation and puncture (CLP)-induced sepsis and multiple myeloma cancer [1] [2].
Targets(IC50)	Wnt/beta-catenin
In vitro	CGK012 (0-20 μM) reduces excessive vascular permeability in HUVECs by inhibiting LPS-induced acetylation of HMGB1 and expression of SIRT1, thereby suppressing the release of HMGB1 and the expression of pathogen-associated molecules such as TLR2/4, without affecting cell viability [1]. It improves inflammatory responses by decreasing adhesion and migration of inflammatory immune cells, and by inhibiting the production of pro-inflammatory cytokines IL-6, TNF-α, and transcription factors NF-kB and ERK1/2 [1]. Moreover, CGK012 (0-20 μM) promotes β-catenin phosphorylation and degradation, suppressing β-catenin-dependent gene expression, and inhibiting the proliferation of multiple myeloma cells RPMI-8226 with an IC50 of 5.08 μM [2]. In cell viability assays [1] using HUVECs at concentrations of 5-100 μM over 48 hours, CGK012 showed no impact on cell viability. Western blot analysis [1] in HUVECs, HEK293-FL reporter, and RPMI-8226 cells at 0-20 μM for 12 hours demonstrated reduced levels of SIRT1 and acetylated HMGB1, as well as decreased β-catenin in HEK293-FL reporter and RPMI-8226. Cell migration assays [1] with HUVECs at 0-20 μM for 6 hours showed inhibition of neutrophil migration through HUVEC monolayers.
In vivo	CGK012 (0.05-0.53 mg/kg, intravenously, double dose) suppresses HMGB1 release and immune cell migration, thereby enhancing vascular cell stability and survival rates in C57BL/6 mice with sepsis induced by cecal ligation and puncture [1]. Animal Model: CLP-induced sepsis in C57BL/6 mice [1]. Dosage: 0.26-0.53 mg/kg. Administration: double doses, 12 or 50 hours post-surgery. Result: Decreased HMGB1 expression and increased survival rate.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.798 mL	13.9899 mL	27.9799 mL
5 mM	0.5596 mL	2.798 mL	5.596 mL
10 mM	0.2798 mL	1.399 mL	2.798 mL
50 mM	0.056 mL	0.2798 mL	0.5596 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.