

GNE684

Chemical Properties

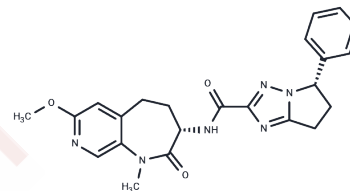
CAS No. : 2438637-64-8

Formula: C₂₃H₂₄N₆O₃

Molecular Weight: 432.48

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	GNE684 is a potent inhibitor of receptor interacting protein 1 (RIP1) with average K_i app values of 21 nM for human, 189 nM for mouse, and 691 nM for rat RIP1, respectively [1].
Targets(IC50)	RIP kinase, TNF
In vitro	GNE684, at a concentration of 20 μ M for 20 hours, effectively inhibits RIP1 kinase-driven cell death across various human and mouse cell lines, as evidenced by cell viability assays in L929, Jurkat, and MEF cells. Furthermore, within a timeframe of 0 to 60 minutes, GNE684 disrupts TBZ-induced processes in HT-29 and J774A.1 cells, including RIP1 autophosphorylation, the interaction between RIP1 and RIP3, RIP3 autophosphorylation, and RIP3-mediated phosphorylation of MLKL, at the same concentration without altering conditions. These findings are supported by Western blot analysis, demonstrating GNE684's potent inhibitory effects on key mechanisms contributing to cell death and signaling pathways.
In vivo	GNE684 did not affect overall survival or tumor growth in the KPP or KPR (LSL-Kras G12D/+; p16/p19 fl/wt; Trp53 R270H/wt; Pdx1-cre) PDAC models. However, GNE684 (50 mg/kg; p.o. twice daily) inhibits colitis and ileitis caused by NEMO deficiency in intestinal epithelial cells (IECs) [1]. In the Nemo fl/fl Villin.creERT2 mice (NEMO IEC-KO) model, oral administration of 50 mg/kg twice daily from days 2-6 with tamoxifen almost completely protected the NEMO-deficient intestines from colitis and ileitis.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3122 mL	11.5612 mL	23.1225 mL
5 mM	0.4624 mL	2.3122 mL	4.6245 mL
10 mM	0.2312 mL	1.1561 mL	2.3122 mL
50 mM	0.0462 mL	0.2312 mL	0.4624 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.

Reference

Patel S, et al. RIP1 inhibition blocks inflammatory diseases but not tumor growth or metastases. Cell Death Differ. 2019 May 17.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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