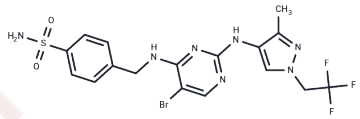
Data Sheet (Cat.No.T5540)

TargetMol

GSK8612

Chemical Properties



CAS No. : 2361659-62-1

Formula: C17H17BrF3N7O2S

Molecular Weight: 520.33

Storage: Store at low temperature
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	GSK8612 is a highly selective and potent inhibitor of Tank-binding Kinase-1 (TBK1, pIC50: 6.8).
Targets(IC50)	IκB/IKK
In vitro	In cellular assays, GSK8612 inhibited toll-like receptor (TLR)3-induced interferon regulatory factor (IRF)3 phosphorylation in Ramos cells and type I interferon (IFN) secretion in primary human mononuclear cells. In THP1 cells, GSK8612 was able to inhibit secretion of interferon-beta (IFNβ) in response to dsDNA and cGAMP, the natural ligand for STING.

Solubility Information

Solubility	H2O: Insoluble, DMSO: 34 mg/mL (65.34 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.84 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9219 mL	9.6093 mL	19.2186 mL
5 mM	0.3844 mL	1.9219 mL	3.8437 mL
10 mM	0.1922 mL	0.9609 mL	1.9219 mL
50 mM	0.0384 mL	0.1922 mL	0.3844 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

Thomson DW, et al. Discovery of GSK8612, a Highly Selective and Potent TBK1 Inhibitor. ACS Med Chem Lett. 2019 Mar 11;10(5):780-785.
Zhang K M, Zhao D C, Li Z Y, et al.Inactivated cGAS-STING Signaling Facilitates Endocrine Resistance by Forming a Positive Feedback Loop with AKT Kinase in ER+ HER2-Breast Cancer.Advanced Science.2024: 2403592.
Luo G, Zhang J, Wang T, et al.A human commensal-pathogenic fungus suppresses host immunity via targeting TBK1.Cell Host & Microbe.2024