

ZB-R-55

Chemical Properties

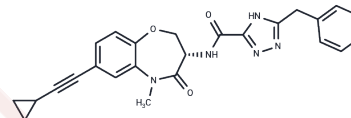
CAS No. : 2416593-55-8

Formula: C₂₅H₂₃N₅O₃

Molecular Weight: 441.48

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	ZB-R-55 is an orally available and highly potent bimodal RIPK1 inhibitor with excellent kinase selectivity in lps-induced sepsis models for the study of SIRS and sepsis.
Targets(IC50)	RIP kinase
In vitro	ZB-R-55 exhibits 10 times greater inhibitory activity against RIPK1 compared to GSK2982772, demonstrating exceptional kinase selectivity.[1]
In vivo	In an LPS/TNF- α -induced sepsis mouse model, oral administration of ZB-R-55 (10 mg/kg) significantly alleviated hypothermia, reduced cytokine storm, and improved survival rate. [2]

Solubility Information

Solubility	DMSO: 80 mg/mL (181.21 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: 3.3 mg/mL (7.47 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2651 mL	11.3255 mL	22.6511 mL
5 mM	0.453 mL	2.2651 mL	4.5302 mL
10 mM	0.2265 mL	1.1326 mL	2.2651 mL
50 mM	0.0453 mL	0.2265 mL	0.453 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

Yang X, Lu H, Xie H, Zhang B, Nie T, Fan C, Yang T, Xu Y, Su H, Tang W, Zhou B. Potent and Selective RIPK1 Inhibitors Targeting Dual-Pockets for the Treatment of Systemic Inflammatory Response Syndrome and Sepsis. *Angew Chem Int Ed Engl.* 2022 Jan 26;61(5):e202114922.

Liu, X., Tang, A-Ling., Chen, J., Gao, N., Zhang, G., & Xiao, C. (2023). RIPK1 in the inflammatory response and sepsis: Recent advances, drug discovery and beyond. *Frontiers in Immunology*, 14.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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