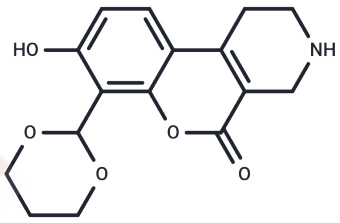
Data Sheet (Cat.No.T14847)

TargetMol

B I09

Chemical Properties



CAS No. : 1607803-67-7

Formula: C16H17NO5

Molecular Weight: 303.31

Storage: Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

Biological Description

Description	B I09, an IRE-1 RNase inhibitor with an IC50 of 1230 nM, inhibits splicing of XBP1 mRNA in human WaC3 cells and expression of xbp-1 in LPS-stimulated B cells. B I09 can be used to simulate the defects of XBP-1 in CLL cells., an IRE-1 RNase inhibitor with an IC50 of 1230 nM, inhibits splicing of XBP1 mRNA in human WaC3 cells and expression of xbp-1 in LPS-stimulated B cells. B I09 can be used to simulate the defects of XBP-1 in CLL cells., an IRE-1 RNase inhibitor with an IC50 of 1230 nM, inhibits splicing of XBP1 mRNA in human WaC3 cells and expression of xbp-1 in LPS-stimulated B cells. B I09 can be used to simulate the defects of XBP-1 in CLL cells.
Targets(IC50)	IRE1
In vitro	B I09 is an IRE-1 RNase inhibitor with an IC50 of 1230 nM[1], effectively inhibiting the splicing of XBP1 mRNA in human WaC3 cells and the expression of XBP-1s in LPS-stimulated B cells[2]. Treatment of CLL cells with B I09 mimics XBP-1 deficiency, including upregulation of IRE-1 expression and compromised BCR signaling.
In vivo	B I09 exhibits a half-life of roughly 1.5 hours and achieves its maximum concentration of about 39 μM in mouse plasma serum within 15 minutes post-administration. Upon administration to mice bearing CLL tumors, B I09 effectively halts leukemic progression through apoptosis induction, without inducing systemic toxicity[2].

Solubility Information

Solubility	DMSO: 37.5 mg/mL (123.64 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 1 mg/mL (3.3 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	3.297 mL	16.4848 mL	32.9696 mL
5 mM	0.6594 mL	3.297 mL	6.5939 mL
10 mM	0.3297 mL	1.6485 mL	3.297 mL
50 mM	0.0659 mL	0.3297 mL	0.6594 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

Ranatunga S, Tang CH, Kang CW, et al. Synthesis of novel tricyclic chromenone-based inhibitors of IRE-1 RNase activity. J Med Chem. 2014;57(10):4289-4301.
Tang CH, Ranatunga S, Kriss CL, et al. Inhibition of ER stress-associated IRE-1/XBP-1 pathway reduces leukemic cell survival. J Clin Invest. 2014;124(6):2585-2598.