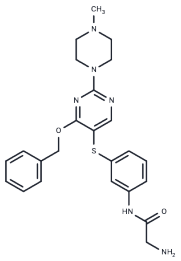
Data Sheet (Cat.No.T3487)

TargetMol

HSP70-IN-1

Chemical Properties



CAS No. : 1268273-90-0

Formula: C24H28N6O2S

Molecular Weight: 464.58

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	HSP70-IN-1 is a heat shock protein (HSP) inhibitor that suppresses the growth of Kasumi-1 cells with an IC50 of 2.3 μM.
Targets(IC50)	HSP
In vitro	Heat shock protein 70 (Hsp70) functions as a molecular chaperone crucial for protein homeostasis, cell signaling, and survival, with its overexpression observed in cancer contributing to chemotherapy resistance. HSP70-IN-1 disrupts this by dose-dependently affecting the formation and stability of the Hsp70-HOP-Hsp90 complex, crucial for cancer cell survival, including altering components of this megacomplex and destabilizing the Hsp70-Hsp90 machinery client, Raf-1. It also inhibits the refolding capability of endogenous and transfected Hsp70 for heat-denatured luciferase in cells, and induces apoptosis in cancer cells by modifying the Hsp70-HOP complex formation and stability, leading to their reduced half-life.

Solubility Information

Solubility	DMSO: 45 mg/mL (96.86 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 (4.3 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	2.1525 mL	10.7624 mL	21.5248 mL
5 mM	0.4305 mL	2.1525 mL	4.305 mL
10 mM	0.2152 mL	1.0762 mL	2.1525 mL
50 mM	0.043 mL	0.2152 mL	0.4305 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

Taldone T, et al. Heat shock protein 70 inhibitors. 2. 2,5'-thiodipyrimidines, 5-(phenylthio)pyrimidines, 2-(pyridin-3-ylthio)pyrimidines, and 3-(phenylthio)pyridines as reversible binders to an allosteric site on heat shock protein 70. J Med Chem. 2014 Feb 27;57(4):1208-24.