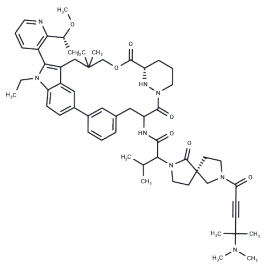
Data Sheet (Cat.No.T79870)

TargetMol

RMC-4998

Chemical Properties



CAS No. : 2642037-07-6

Formula: C57H74N8O7

Molecular Weight: 983.25

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	RMC-4998 is an orally available KRASG12C mutant inhibitor that targets the active or GTP-bound state of the KRASG12C mutant and binds to intracellular CYPA to form a triple complex to inhibit the ERK signaling pathway and induce apoptosis, which is of great significance for tumor research.
Targets(IC50)	Apoptosis,ERK,mTOR,PI3K,Ras,Kras
In vitro	RMC-4998 is a selective KRASG12C inhibitor that forms a ternary complex with cyclophilin A and KRASG12C-GTP, enabling rapid covalent modification and inhibition of KRASG12C (IC_{50} = 1-10nM). RMC-4998 disrupts KRAS interactions with downstream effectors such as CRAF and SOS, effectively suppressing ERK signaling. RMC-4998 remains active even under RTK stimulation (e.g., EGF or HGF) and shows no activity against wild-type KRAS, NRAS, or HRAS[1].
In vivo	In H358 xenograft mouse models, oral administration of RMC-4998 significantly inhibited tumor growth or induced regression, accompanied by ERK pathway suppression and apoptosis induction[1]. In KRASG12C-mutant NSCLC xenograft models (such as H2122, H2030, and multiple PDX models), oral administration of RMC-4998 (80mg/kg, once daily) delayed tumor growth, while combination with the mTORC1 inhibitor RMC-6272 (6mg/kg, intraperitoneally, once weekly) induced deep and durable complete tumor regressions without notable weight loss or hyperglycemia-related toxicity[2].

Solubility Information

Solubility	DMSO: 80 mg/mL (81.36 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 (3.36 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	1.017 mL	5.0852 mL	10.1704 mL
5 mM	0.2034 mL	1.017 mL	2.0341 mL
10 mM	0.1017 mL	0.5085 mL	1.017 mL
50 mM	0.0203 mL	0.1017 mL	0.2034 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

Schulze CJ, et al. Chemical remodeling of a cellular chaperone to target the active state of mutant KRAS. Science. 2023 Aug 18;381(6659):794-799.
Kitai H,et al. Combined inhibition of KRASG12C and mTORC1 kinase is synergistic in non-small cell lung cancer. Nat Commun. 2024 Jul 19;15(1):6076.