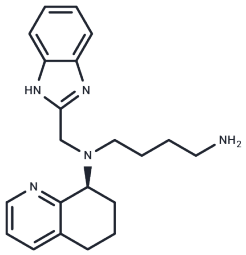
Data Sheet (Cat.No.TQ0174)

TargetMol

Mavorixafor

Chemical Properties



CAS No. : 558447-26-0

Formula: C21H27N5

Molecular Weight: 349.47

Storage: Store under nitrogen,Keep away from moisture
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	Mavorixafor (AMD-070) is an effective and selective antagonist of CXCR4, with an IC50 value of 13 nM against CXCR4 125I-SDF binding. Mavorixafor inhibits the replication of T-tropic HIV-1 (NL4.3 strain) in MT-4 cells (IC50 = 1 nM) and PBMCs (IC50 = 9 nM).
Targets(IC50)	HIV Protease,CXCR
In vitro	Mavorixafor (6.6 μM) significantly decreases the anchorage-dependent growth, migration, and matrigel invasion of the B88-SDF-1 cells [1]. Mavorixafor shows no effect on other chemokine receptors (CCR1, CCR2b, CCR4, CCR5, CXCR1, and CXCR2) [2].
In vivo	AMD-070 (2 mg/kg, p.o.) markedly decreases the quantity of metastatic lung nodules in mice and reduces human Alu DNA expression without causing weight loss [1].
Cell Research	Cells are seeded on a 96-well plate at 5 × 10^3 cells/well in DMEM containing 10% FCS. Twenty-four hours later, the cells are treated with or without 2 μM AMD3100 or 6.6 μM AMD-070. After 24 or 48 h, the number of cells is quantified by an assay using MTT [2].
Animal Research	BALB/c nude mice are maintained under pathogen-free conditions. The experiments are initiated when the mice are 8 weeks of age. Briefly, the cells are inoculated into the blood vessels of nude mice (1× 10^6). These mice are sacrificed at day 49. The presence or absence of distant metastases is confirmed by hematoxylin and eosin (H&E) staining. For experimental chemotherapy, the mice are treated by the daily oral administration of 0.2 mL of saline for a vehicle or the same volume of AMD-070 (2 mg/kg) [2].

Solubility Information

Solubility	Ethanol: 44 mg/mL (125.9 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble) DMSO: 44 mg/mL (125.9 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 (5.72 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	2.8615 mL	14.3074 mL	28.6148 mL
5 mM	0.5723 mL	2.8615 mL	5.723 mL
10 mM	0.2861 mL	1.4307 mL	2.8615 mL
50 mM	0.0572 mL	0.2861 mL	0.5723 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

Chow LN, et al. Impact of a CXCL12/CXCR4 Antagonist in Bleomycin (BLM) Induced Pulmonary Fibrosis and Carbon Tetrachloride (CCl4) Induced Hepatic Fibrosis in Mice. PLoS One. 2016 Mar 21;11(3):e0151765.

Skerlj RT, et al. Discovery of novel small molecule orally bioavailable C-X-C chemokine receptor 4 antagonists that are potent inhibitors of T-tropic (X4) HIV-1 replication. J Med Chem. 2010 Apr 22;53(8):3376-88.

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