Data Sheet (Cat.No.TQ0174)

AMD-070

Chemical Properties

CAS No.:	558447-26-0
Formula:	C21H27N5
Molecular Weight:	349.48
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Mavorixafor (AMD-070) is a selective and orally available CXCR4 antagonist (IC50: 13 nM against CXCR4 125I-SDF binding) and also inhibits the replication of T-tropic HIV-1 (NL4.3 strain) in MT-4 cells and PBMCs (IC50: 1 and 9 nM).
In vitro	AMD-070 shows no effect on other chemokine receptors (CCR1, CCR2b, CCR4, CCR5, CXCR1, and CXCR2) [1]. AMD-070 (6.6 μM) significantly suppresses the anchorage-dependent growth, the migration and matrigel invasion of the B88-SDF-1 cells [2].
In vivo	AMD-070 (2 mg/kg, p.o.) significantly reduces the number of metastatic lung nodules in mice, and lowers the expression of human Alu DNA in mice, without body weight loss [2].
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	DMSO: 17 mg/mL (48.64 mM) Water: 7 mg/mL (20.03 mM) Ethanol: 44 mg/mL (125.9 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.861 mL	14.307 mL	28.614 mL
5 mM	0.572 mL	2.861 mL	5.723 mL
10 mM	0.286 mL	1.431 mL	2.861 mL
50 mM	0.057 mL	0.286 mL	0.572 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. 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.
2. 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.

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