**Mavorixafor**

**Cat. No.:** HY-50101  
**CAS No.:** 558447-26-0  
**Molecular Formula:** C₂₁H₂₇N₅  
**Molecular Weight:** 349.47  
**Target:** CXCR; HIV  
**Pathway:** GPCR/G Protein; Immunology/Inflammation; Anti-infection  
**Storage:** 4°C, stored under nitrogen  
* In solvent: -80°C, 6 months; -20°C, 1 month (stored under nitrogen)

**BIOLOGICAL ACTIVITY**

**Description**  
Mavorixafor (AMD-070) is a potent, selective and orally available CXCR4 antagonist, with an IC₅₀ value of 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 with an IC₅₀ of 1 and 9 nM, respectively.

| IC₅₀ & Target | ¹²⁵I-SDF-CXCR4  
|             | 13 nM (IC₅₀)  
| HIV-1 (NL4.3 strain) | 1 nM (IC₅₀, in MT-4 cells)  
| HIV-1 (NL4.3 strain) | 9 nM (IC₅₀, in PBMCs)  
| HIV-1 (NL4.3 strain) | 3 nM (IC₉₀, in MT-4 cells)  
| HIV-1 (NL4.3 strain) | 26 nM (IC₉₀, in PBMCs)  

**In Vitro**  
Mavorixafor (AMD-070) is a potent and orally available CXCR4 antagonist, with an IC₅₀ value of 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 with an IC₅₀ of 1 and 9 nM, respectively. Mavorixafor (AMD-070) shows no effect on other chemokine receptors (CCR1, CCR2b, CCR4, CCR5, CXCR1, and CXCR2)[1]. Mavorixafor (AMD-070) (6.6 µM) significantly suppresses the anchorage-dependent growth, the migration and matrigel invasion of the B88-SDF-1 cells[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**  
Mavorixafor (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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**PROTOCOL**

**Cell Assay**[2]  
Cells are seeded on a 96-well plate at 5 x 10³ 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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**Animal Administration**[2]  
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 x 10⁶). 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 Mavorixafor (AMD-070) (2 mg/kg). MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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