Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Plerixafor (octahydrochloride)

Catalog No: tcsc0321

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
155148-31-5

Formula:
$C_{28}H_{62}Cl_8N_8$

Pathway:
GPCR/G Protein;Immunology/Inflammation

Target:
CXCR;CXCR

Purity / Grade:
>98%

Solubility:
H2O : ≥ 42 mg/mL (52.87 mM)

Alternative Names:
AMD3100 octahydrochloride;JM3100 octahydrochloride;SID791 octahydrochloride

Observed Molecular Weight:
794.47

Product Description

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Plerixafor octahydrochloride is a selective **CXCR4** antagonist with **IC_{50}** of 44 nM.

IC50 & Target: IC50: 44 nM (CXCR4)[1]

In Vitro: The CXCR4 inhibitor Plerixafor (AMD3100) is a potent inhibitor of CXCL12-mediated chemotaxis (IC_{50}, 5.7 nM) with a potency slightly better than its affinity for CXCR4. Treating the cells with CCX771 or CXCL11 has no effect on CXCL12-mediated MOLT-4 or U937 TEM. In contrast, 10 μM Plerixafor inhibits CXCL12-mediated TEM in both cells lines[1]. Plerixafor (10 μM)-treated cells show a moderate reduction in cell proliferation compared to CXCL12-stimulated cells, which do not reach statistical significance [2].

In Vivo: Plerixafor (2 mg/kg) administration to UUO mice exacerbates renal interstitial T cell infiltration, resulting in increased production of the pro-inflammatory cytokines IL-6 and IFN-γ and decreased expression of the anti-inflammatory cytokine IL-10[3]. Both perivascular and interstitial fibrosis are significantly reduced by the CXCR4 antagonist, Plerixafor (AMD3100) at 8 weeks[4]. LD50, mouse, SC: 16.3 mg/kg; LD50, rat, SC: >50 mg/kg; LD50, mouse and rat, IV injection: 5.2 mg/kg.