Product Datasheet

Maraviroc

Catalog No. **BP-02217** · CAS **376348-65-1** · Form **free base** · Physical state **other** · Color **White to off-white** · Version **1.0** · Revision **2026-09-02**

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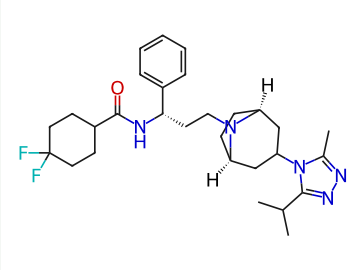
Target	Research area
CCR; HIV	**Inflammation/Immunology; Endocrinology; Cancer**

Molecular formula	**$C_{29}H_{41}F_2N_5O$**
Molecular weight	**513.6655**

STRUCTURE



DESCRIPTION

Maraviroc (UK-427857) is a selective CCR5 antagonist with activity against human HIV.

BIOLOGICAL ACTIVITY

In Vitro

Maraviroc (UK-427857) is a selective CCR5 antagonist with potent anti-human immunodeficiency virus type 1 (HIV-1) activity. Maraviroc inhibits the downstream event of chemokine-induced intracellular calcium redistribution, with IC50s ranging from 7 to 30 nM obtained against MIP-1β, MIP-1α and RANTES.

Maraviroc (UK-427857) is active (IC90) at low nanomolar concentrations against HIV-1 Ba-L (a lab-adapted R5 strain) when measured in a 5-day antiviral assay using either isolated multiple (pooled) donor PBMC (IC90, 3.1 nM), single-donor PBMC (IC90, 1.8 nM) or PM-1 cells (IC90, 1.1 nM)

In Vivo

Clearance values are moderate to high in both rat and dog species following i.v. administration (74 and 21 mL/min/kg, respectively). Maraviroc also has a moderate volume of distribution in both species (4.3 to 6.5 liters/kg). The half-life values of maraviroc are 0.9 h in the rat and 2.3 h in the dog. Following oral administration (2 mg/kg) to the dog, the Cmax(256 ng/mL) occurs 1.5 h. post-dose, and the bioavailability is 40%. For the rat, investigation of the concentrations obtain in the portal vein following oral administration indicated that approximately 30% of the administered dose is absorbed from the intestinal tract[1]. In the DSS/TNBS colitis and in the transfer model, Maraviroc attenuates development of intestinal inflammation by selectively reducing the recruitment of CCR5 bearing leukocytes

SOLUBILITY

Soluble in DMSO : 50 mg/mL (97.34 mM; Need ultrasonic)

Ethanol : 6.5 mg/mL (12.65 mM; Need ultrasonic)

REFERENCES

[1]. Dorr P, et al. Maraviroc (UK-427,857), a potent, orally bioavailable, and selective small-molecule inhibitor of chemokine receptor CCR5 with broad-spectrum anti-human immunodeficiency virus type 1 activity. Antimicrob Agents Chemother. 2005 Nov;49(11):472

[2]. Mencarelli A, et al. Highly specific blockade of CCR5 inhibits leukocyte trafficking and reduces mucosal inflammation in murine colitis. Sci Rep. 2016 Aug 5;6:30802.

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