

# PRODUCT INFORMATION

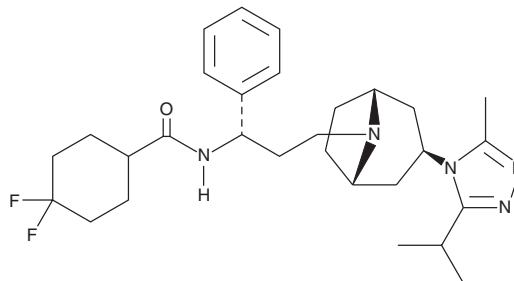


## Maraviroc

Item No. 14641

**CAS Registry No.:** 376348-65-1  
**Formal Name:** 4,4-difluoro-N-[(1S)-3-[(3-exo)-3-[3-methyl-5-(1-methylethyl)-4H-1,2,4-triazol-4-yl]-8-azabicyclo[3.2.1]oct-8-yl]-1-phenylpropyl]-cyclohexanecarboxamide

**Synonym:** UK 427857  
**MF:** C<sub>29</sub>H<sub>41</sub>F<sub>2</sub>N<sub>5</sub>O  
**FW:** 513.7  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Maraviroc is supplied as a crystalline solid. A stock solution may be made by dissolving the maraviroc in the solvent of choice, which should be purged with an inert gas. Maraviroc is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of maraviroc in these solvents is approximately 25, 3.3, and 5 mg/ml, respectively.

Maraviroc is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, maraviroc should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Maraviroc has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Maraviroc is an antagonist of chemokine (C-C motif) receptor 5 (CCR5;  $K_i = 0.24$  nM for the rhesus monkey recombinant receptor).<sup>1</sup> It inhibits binding of MIP-1 $\alpha$ , MIP-1 $\beta$ , and RANTES to HEK293 cell membranes expressing CCR5 ( $IC_{50}$ s = 3.3, 7.2, and 5.2 nM, respectively) and inhibits HIV-1 binding to CCR5 via glycoprotein 120 (gp120) and gp160 ( $IC_{50}$ s = 11 and 0.22 nM, respectively).<sup>2</sup> Maraviroc is selective for CCR5 over CCR1, -2, -3, -4, -7, and -8, and chemokine (C-X-C motif) receptor 1 (CXCR1) and CXCR2 in a panel of immunological assays for ligand-induced cell chemotaxis and ligand-receptor binding ( $IC_{50}$ s = >10  $\mu$ M for all). It has antiviral activity against laboratory and clinical isolates of CCR5-tropic ( $IC_{50}$ s = 0.1-1.1 nM), but not CXCR4-tropic or dual tropic ( $IC_{50}$ s = >10  $\mu$ M), HIV-1 in isolated human peripheral blood mononuclear cells (PBMCs). Maraviroc prevents infection upon exposure to HIV-1 in humanized RAG-hum mice when administered at a dose of 62 mg/kg.<sup>3</sup>

### References

1. Yuan, Y., Arnatt, C.K., El-Hage, N., *et al. Medchemcomm.* **4(5)**, 847-851 (2013).
2. Dorr, P., Westby, M., Dobbs, S., *et al. Antimicrob. Agents Chemother.* **49(11)**, 4721-4732 (2005).
3. Neff, C.P., Ndolo, T., Tandon, A., *et al. PLoS One* **5(12)**, e15257 (2010).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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