

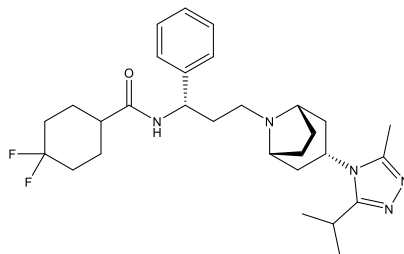
**Catalog # 10-4260**

**Maraviroc**

CAS# 376348-65-1

4,4-difluoro-*N*-[(1*S*)-3-[(1*R*,5*S*)-3-(3-methyl-5-propan-2-yl-1,2,4-triazol-4-yl)-8-azabicyclo[3.2.1]octan-8-yl]-1-phenylpropyl]cyclohexane-1-carboxamide; UK-427,857

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Maraviroc is a potent and selective CCR5 antagonist with potent anti-HIV activity. It prevents HIV-1 gp120 binding to CCR5 preventing cell-cell fusion. Maraviroc inhibited MIP-1 $\alpha$  (IC<sub>50</sub> = 3.3 nM), MIP-1 $\beta$  (IC<sub>50</sub> = 7.2 nM), and RANTES (IC<sub>50</sub> = 5.2 nM) binding to CCR5-expressing HEK-293.<sup>1</sup> Clinically useful antiretroviral drug. Many cancer cells express CCR5: Maraviroc blocked metastasis of basal breast<sup>2</sup> and pancreatic cancer<sup>3</sup> cells, induced cytotoxic and apoptotic effects in colorectal cancer cells<sup>4</sup>, reduced metastatic tumor growth in lungs<sup>5</sup>, and suppresses growth in acute ALL cells<sup>6</sup>. CCR5 inhibition with maraviroc showed macrophage repolarization with anti-tumoral effects.<sup>7</sup>

- 1) Dorr *et al.* (2005), *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. **49** 4721
- 2) Velasco-Velazquez *et al.* (2012), *CCR5 antagonist blocks metastasis of basal breast cancer cells*; Cancer Res. **72** 3839
- 3) Singh *et al.* (2018), *CCR5/CCL5 axis interaction promotes migratory and invasiveness of pancreatic cancer cells*; Sci.Rep. **8** 1323
- 4) Pervaiz *et al.* (2015), *CCR5 blockage by maraviroc induces cytotoxic and apoptotic effects in colorectal cancer cells*; Med.Oncol. **32** 158
- 5) Halvorsen *et al.* (2016), *Maraviroc decreases CCL8-mediated migration of CCR5(+) regulatory T cells and reduces metastatic tumor growth in the lungs*; Oncoimmunology **5** e1150398
- 6) Zi *et al.* (2017), *Treatment with the C-C chemokine receptor type 5(CCR5)-inhibitor maraviroc suppresses growth and induces apoptosis of acute lymphoblastic leukemia cells*; Am.J.Cancer Res. **7** 869
- 7) Halama *et al.* (2016), *Tumoral Immune Cell Exploitation in Colorectal Cancer Metastases Can Be targeted Effectively by Anti-CCR5 Therapy in Cancer Patients*; Cancer Cell **29** 587

**PHYSICAL DATA**

Molecular Weight:	513.68
Molecular Formula:	C <sub>29</sub> H <sub>41</sub> F <sub>2</sub> N <sub>5</sub> O
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 month.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**