

TAK-779

Catalog No: tcsc2026



Available Sizes

Size: 5mg

Size: 10mg



Specifications

CAS No:

229005-80-5

Formula:

$C_{33}H_{39}ClN_2O_2$

Pathway:

Immunology/Inflammation;GPCR/G Protein;GPCR/G Protein;Immunology/Inflammation;Anti-infection

Target:

CCR;CCR;CXCR;CXCR;HIV

Purity / Grade:

>98%

Solubility:

H₂O : 16.66 mg/mL (31.37 mM; Need ultrasonic and warming); DMSO : ≥ 25 mg/mL (47.07 mM)

Alternative Names:

Takeda 779

Observed Molecular Weight:

531.13

Product Description

TAK-779 is a potent and selective nonpeptide antagonist of **CCR5** and **CXCR3**, with a **K_i** of 1.1 nM for CCR5, and effectively and selectively inhibits **R5 HIV-1**, with **EC₅₀** and **EC₉₀** of 1.2 nM and 5.7 nM, respectively, in MAGI-CCR5 cells.

IC50 & Target: Ki: 1.1 nM (CCR5)^[1]

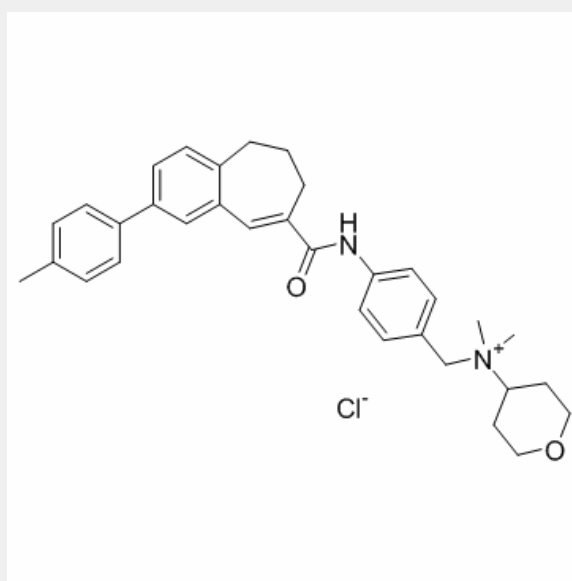
EC50: 1.2 nM (R5 HIV-1, in MAGI-CCR5 cells)^[1]

EC90: 5.7 nM (R5 HIV-1, in MAGI-CCR5 cells)^[1]

CXCR^[2]

In Vitro: TAK-779 is a potent and selective nonpeptide antagonist of CCR5, with a K_i of 1.1 nM, and effectively and selectively inhibits R5 HIV-1, with EC_{50} and EC_{90} of 1.2 nM and 5.7 nM, respectively, in MAGI-CCR5 cells. TAK-779 less potently blocks the binding of [¹²⁵I]-monocyte chemotactic protein 1 to CCR2b in CHO/CCR2b cells, with an IC_{50} for CCR2b of 27 nM. TAK-779 also completely inhibits the binding of [¹²⁵I]-RANTES to CHO/CCR5 cells with an IC_{50} of 1.4 nM. TAK-779 (20 nM) selectively inhibits CCR5-mediated Ca^{2+} -signaling. In addition, TAK-779 shows no inhibition on X4 HIV-1 strains^[1]. TAK-779 is an antagonist of CXCR3, and inhibits the migration of T cells but not T cell proliferation^[2].

In Vivo: TAK-779 (10 mg/kg per day, s.c.) significantly prolongs the allograft survival of the rat intestinal transplantation model. TAK-779 also decreases the number of CD4⁺ as well as CD8⁺ T cells in spleen, blood and recipient mesenteric lymph nodes (MLN)^[2]. TAK-779 (150 µg per mouse, s.c.) suppresses the development of experimental autoimmune encephalomyelitis (EAE) in myelin oligodendrocyte glycoprotein (MOG)-immunized C57BL/6 mice. TAK-779 decreases the infiltration of CXCR3 and CCR5 bearing leukocytes into the spinal cord. TAK-779 does not alter myelin oligodendrocyte glycoprotein (MOG)-specific immune responses or affect the potential of MOG-specific T cells to transfer experimental autoimmune encephalomyelitis (EAE)^[3].



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