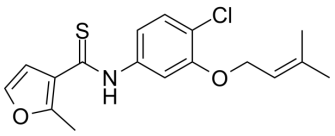
UC-781

Cat. No.:	HY-15351
CAS No.:	178870-32-1
Molecular Formula:	$C_{17}H_{18}ClNO_2S$
Molecular Weight:	335.85
Target:	HIV
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	UC-781 (NSC 675186) is a highly potent and selective nonnucleoside reverse transcriptase inhibitor (NNRTI) of HIV-1 with an IC_{50} value of 5 nM. UC-781 is stable under low PH or various temperatures conditions. UC-781 has antiviral activity and resistance[1][2][3].
IC_{50} & Target	HIV-1 0.005 μM (IC_{50})
In Vitro	UC-781 (0.05, 0.2 and 0.5 % UC-781 replens gel; 10 d) is released from gel preparation and eliminates HIV-1 virus in CEM cells [1]. UC-781 (3.75-30 μM) inhibits the growth of Bacillus cereus (about 50 %)[1]. UC-781 inhibits the activity of HIV-1 ($\boxtimes_B$) in CEM T cells (EC_{50}=6 nM; IC_{50}=23 nM). UC-781 inhibits the activity of HIV in Monocyte-Derived Dendritic Cell (MO-DC) and autologous $CD4^+$ T cells with EC_{50} values of 550 nM and 1588 nM, respectively [2]. UC-781 (1 μM or 10 μM; 24 h) effectively prevents or blocks MO-DC and autologous $CD4^+$ T cells infected HIV[2]. UC-781 (0.001-1000 μM; 2 h) inhibits the transition of virus cervical explants infected with HIV-1_{BaL}[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	UC-781 (100 μl 5% UC-781 replens gel; intravaginal; once daily for 10 days) releases from gel preparation and shows low toxicity to normal tissues in female rabbit[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female rabbit (~1200 g; 10 weeks old)[1].
Dosage:	100 μl 5% UC-781 replens gel.
Administration:	Intravaginal; once daily for 10 days.
Result:	Released from gel preparation and had normal histology without significant increases inflammatory cells in rabbits.

REFERENCES

[1]. Balzarini J, et al. Preclinical studies on thiocarboxanilide UC-781 as a virucidal agent. AIDS. 1998 Jul 9;12(10):1129-38.

[2]. Van Herrewege Y, et al. In vitro evaluation of nonnucleoside reverse transcriptase inhibitors UC-781 and TMC120-R147681 as human immunodeficiency virus microbicides. Antimicrob Agents Chemother. 2004 Jan;48(1):337-9.

[3]. Balzarini J, et al. Highly favorable antiviral activity and resistance profile of the novel thiocarboxanilide pentenyloxy ether derivatives UC-781 and UC-82 as inhibitors of human immunodeficiency virus type 1 replication. Mol Pharmacol. 1996 Aug;50(2):394-401.

[4]. Fletcher P, et al. The nonnucleoside reverse transcriptase inhibitor UC-781 inhibits human immunodeficiency virus type 1 infection of human cervical tissue and dissemination by migratory cells. J Virol. 2005 Sep;79(17):11179-86.

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