
Product Data Sheet

Product Name: Enfuvirtide acetate

Cat. No.: GC38109

Chemical Properties

Cas. No. 914454-00-5

Formula $C_{206}H_{305}N_{51}O_{66}$

M.Wt 4551.93

Solubility DMSO : 100 mg/mL (21.97 mM; Need ultrasonic); H₂O : 2 mg/mL (0.44 mM; Need ultrasonic)

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Enfuvirtide is a biomimetic peptide inhibitor of HIV-1 fusion with CD4⁺ cells.¹ It inhibits HIV-1 infectivity of HeLa cells stably expressing CD4 by the HXB2 strain (IC₅₀ = 692 pM) and by clinical isolates (IC_{90s} = 6.1-61 nM) in a single-cycle infectivity assay. It also inhibits genomic integration of HIV-1 into human intraepithelial vaginal cells and peripheral blood mononuclear cells (PBMCs; IC_{50s} = 51.2 and 13.58 μM, respectively).² Enfuvirtide binds to a recombinant molecular mimic of HIV-1 glycoprotein gp41 that contains three N-terminal heptad and two C-terminal heptad repeat regions (K_d = 32 nM).³ It also binds to recombinant formyl peptide receptors (FPR) expressed in rat basophilic leukemia cells (IC₅₀ = 5 nM) and attracts and activates human peripheral blood phagocytes, but not T lymphocytes, *in vitro* when used at a concentration of 100 nM.⁴ Formulations containing enfuvirtide have been used in combination therapy for the treatment of HIV-1/AIDS.

1. Ingallinella, P., Bianchi, E., Ladwa, N.A., et al. Addition of a cholesterol group to an HIV-1 peptide fusion inhibitor dramatically increases its antiviral potency Proc. Natl. Acad. Sci.

Caution: Product has not been fully validated for medical applications. For research use only.

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USA106(14)5801-5806(2009) 2.McElrath, M.J., Ballweber, L., Terker, A., et al.Ex vivo comparison of microbicide efficacies for preventing HIV-1 genomic integration in intraepithelial vaginal cellsAntimicrob. Agents Chemother.54(2)763-772(2010)
3.Champagne, K., Shishido, A., and Root, M.J.Interactions of HIV-1 inhibitory peptide T20 with the gp41 N-HR coiled coilJ. Biol. Chem.284(6)3619-3627(2009) 4.Sun, S.B., Gong, W.H., Gao, J.L., et al.T20/DP178, an ectodomain peptide of human immunodeficiency virus type 1 gp41, is an activator of human phagocyte N-formyl peptide receptorBlood93(11)3885-3892(1999)

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