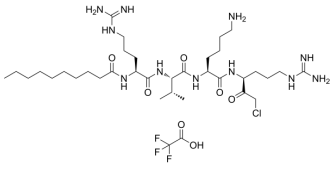
Decanoyl-RVKR-CMK TFA

Cat. No.:	HY-107760A
CAS No.:	2098497-25-5
Molecular Formula:	$C_{36}H_{67}ClF_3N_{11}O_7$
Molecular Weight:	858.43
Target:	HIV
Pathway:	Anti-infection
Storage:	Sealed storage, away from moisture Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (58.25 mM; Need ultrasonic)
H_2O : 4 mg/mL (4.66 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.1649 mL	5.8246 mL	11.6492 mL
5 mM	0.2330 mL	1.1649 mL	2.3298 mL
10 mM	0.1165 mL	0.5825 mL	1.1649 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (2.91 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (2.91 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (2.91 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Decanoyl-RVKR-CMK (DecRVKRcmk) TFA inhibits over-expressed gp160 processing and HIV-1 replication[1].

IC_{50} & Target	HIV-1	HIV-2

In Vitro

Decanoyl-RVKR-CMK (DecRVKRcmk) TFA inhibits HIV-2_{ROD} replication by blocking envelope glycoprotein precursor processing in the Jurkat lymphocyte cell[1].

?Decanoyl-RVKR-CMK (DecRVKRcmk) TFA blocks regulated secretion of VGF[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HeLaCD4 cells infected with recombinant vaccinia viruses at a multiplicity of infection (MOI) of 5 PFU/mL
Concentration:	35 and 70 μM
Incubation Time:	7 days
Result:	Peptide at 35 μM significantly inhibited ex vivo HIV-1 and HIV-2 replications (70-80% inhibition).

CUSTOMER VALIDATION

- PLoS Pathog. 2023 Nov 10;19(11):e1011789.

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REFERENCES

[1]. B Bahbouhi, et al. Inhibition of HIV-2(ROD) replication in a lymphoblastoid cell line by the alpha1-antitrypsin Portland variant (alpha1-PDX) and the decRVKRcmk peptide: comparison with HIV-1(LAI). Microbes Infect. 2001 Nov;3(13):1073-84.

[2]. Angelo L Garcia, et al. A prohormone convertase cleavage site within a predicted alpha-helix mediates sorting of the neuronal and endocrine polypeptide VGF into the regulated secretory pathway. J Biol Chem. 2005 Dec 16;280(50):41595-608.

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