

TC14012 acetate

Chemical Properties

CAS No. :

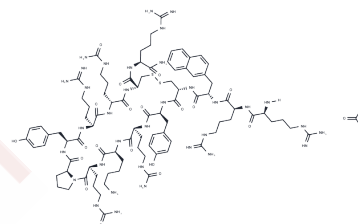
Formula: C₉₂H₁₄₄N₃₄O₂₁S₂

Molecular Weight: 2126.47

Store at low temperature, Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	TC14012 acetate is a serum-stable derivative of T140 which is a selective and peptidomimetic CXCR4 antagonist with an IC ₅₀ of 19.3 nM. TC14012 is also a potent CXCR7 agonist with an EC ₅₀ of 350 nM for recruiting β -arrestin 2 to CXCR7. TC14012 has anti-cancer activity and anti-HIV activity.
Targets(IC ₅₀)	Arrestin, CXCR
In vitro	TC14012 (1 mM) inhibits more than 95% the infection of the CXCR4-expressing cells by the HXB2 (X4) or 89.6 (dual-tropic) strain. TC14012 (1 mM) does not inhibit all the infection of the CCR5-expressing cells by the SF162 (R5) or 89.6 (dualtropic) strain. TC14012 leads to erk 1/2 phosphorylation in U373 cells, which express endogenous CXCR7 but not CXCR4. CXCR7 and the CXCR7-Cter4 chimera are able to recruit arrestin upon stimulation with TC14012 whereas CXCR4 and CXCR4-Cter7 remain silent.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.4703 mL	2.3513 mL	4.7026 mL
5 mM	0.0941 mL	0.4703 mL	0.9405 mL
10 mM	0.047 mL	0.2351 mL	0.4703 mL
50 mM	0.0094 mL	0.047 mL	0.0941 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

H Tamamura, et al. Development of specific CXCR4 inhibitors possessing high selectivity indexes as well as complete stability in serum based on an anti-HIV peptide T140. *Bioorg Med Chem Lett.* 2001 Jul 23;11(14):1897-902.

Stéphanie Gravel, et al. The peptidomimetic CXCR4 antagonist TC14012 recruits beta-arrestin to CXCR7: roles of receptor domains. *J Biol Chem.* 2010 Dec 3;285(49):37939-43.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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