

ATN-161 trifluoroacetate salt

Chemical Properties

CAS No. : 904763-27-5

Formula: C₂₅H₃₆F₃N₉O₁₀S

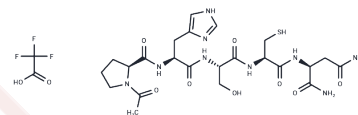
Molecular Weight: 711.67

Storage:

Keep away from direct sunlight, Keep away from moisture, Store at low temperature

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	ATN-161 trifluoroacetate salt (ATN-161 TFA salt) is a novel integrin $\alpha 5\beta 1$ antagonist that inhibits angiogenesis and growth of liver metastases and improves survival in a murine model.
Targets(IC50)	Integrin
In vitro	The co-administration of ATN-161 and 5-FU markedly reduces tumor cell growth more effectively than either treatment alone or the control. Additionally, this combined approach markedly elevates the levels of apoptotic (TUNEL-positive) tumor cells, a result not observed with single-agent treatments. Furthermore, ATN-161 demonstrates a 21% reduction in endothelial cell (EC) numbers after 48 hours compared to controls, highlighting its effectiveness. Importantly, ATN-161 also impedes VEGF-induced endothelial cell migration and capillary formation, although it does not affect their proliferation. It significantly decreases endothelial cell migration towards VEGF in a dose-dependent manner, beginning at 100 nM ($P < 0.001$ vs. VEGF group), showcasing its potential in inhibiting angiogenesis[1][2].
In vivo	Initial tests on $\alpha 5\beta 1$ -negative human colon cancer xenografts (HT29) show ATN-161 significantly decreases tumor weight and vessel density [1]. Administering ATN-161 post-laser photocoagulation effectively suppresses choroidal neovascularization (CNV) leakage and new blood vessel formation, achieving results comparable to those with AF564 [2].

Solubility Information

Solubility	H ₂ O: 5.95 mg/mL (8.36 mM), Sonication is recommended. DMSO: Slightly soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4051 mL	7.0257 mL	14.0515 mL
5 mM	0.281 mL	1.4051 mL	2.8103 mL
10 mM	0.1405 mL	0.7026 mL	1.4051 mL
50 mM	0.0281 mL	0.1405 mL	0.281 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

Stoeltzing O, et al. Inhibition of integrin alpha5beta1 function with a small peptide (ATN-161) plus continuous 5-FU infusion reduces colorectal liver metastases and improves survival in mice. *Int J Cancer*. 2003 Apr 20;104(4):496-503.

Wang W, et al. The antiangiogenic effects of integrin alpha5beta1 inhibitor (ATN-161) in vitro and in vivo. *Invest Ophthalmol Vis Sci*. 2011 Sep 14;52(10):7213-20.

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