

ATN-161

Chemical Properties

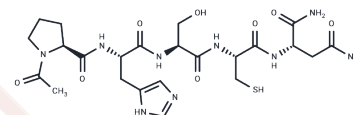
CAS No. : 262438-43-7

Formula: C₂₃H₃₅N₉O₈S

Molecular Weight: 597.64

Storage: Store at low temperature, Keep away from moisture
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 is an integrin $\alpha 5\beta 1$ binding peptide and antagonist that inhibits VEGF-induced hCECs migration and angiogenesis. ATN-161 also suppresses spike protein interaction with integrin $\alpha 5\beta 1$ and may be employed against SARS-CoV-2 infection.
Targets(IC50)	Integrin
In vitro	Compared to the control group and monotherapy, ATN-161 combined with 5-FU significantly inhibited tumor cell proliferation and markedly increased the number of apoptotic (TUNEL-positive) tumor cells. In comparison to the control group, ATN-161 reduced endothelial cell (EC) counts by 21% after 48 hours of incubation [1]. ATN-161 was able to inhibit VEGF-induced migration of Homo sapiens corneal endothelial cells (hCECs) and the formation of capillary-like tubular structures, but showed no inhibitory effect on cell proliferation. Starting from a concentration of 100 nM, ATN-161 reduced VEGF-induced cell migration in a dose-dependent manner[2].
In vivo	In the $\alpha 5\beta 1$ -negative human colon cancer xenograft model (HT29), ATN-161 treatment significantly reduced tumor weight and vascular density [1]. Intravitreal injection of ATN-161 after laser photocoagulation effectively suppressed leakage and neovascularization of choroidal neovascularization (CNV), with efficacy comparable to that of AF564 [2].

Solubility Information

Solubility	DMSO: 20 mg/mL (33.46 mM) H ₂ O: \geq 8 mg/mL ($<$ 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6732 mL	8.3662 mL	16.7325 mL
5 mM	0.3346 mL	1.6732 mL	3.3465 mL
10 mM	0.1673 mL	0.8366 mL	1.6732 mL
50 mM	0.0335 mL	0.1673 mL	0.3346 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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