

Product Data Sheet

Product Name: APTSTAT3-9R
 Cat. No.: GC10439

Chemical Properties

Cas. No. N/A

SMILES NC(CC1=CNC=N1)C(NC([H])C(NC(CC2=CC=CC=C2)C(NC(CCC(N)=O)C(NC(CC3=CNC4=C3C=CC=C4)C(N5C(C(NC([H])C(NC(CO)C(N(C)O)C(NC(CC8=CNC9=C8C=CC=C9)C(NC(CCC(O)=O)C(NC(CC(N)=O)C(NC([H])C(NC(CCCCN)C(NC(CC%10=CNC%11=C%10C=CC=

Formula C₂₂₃H₃₃₀N₈₀O₅₁

M.Wt

4947.51

Solubility Soluble in DMSO

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

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

Structure

Background

Ki: 231 nmol/L

APTSTAT3-9R-9R is a STAT3 inhibitor.

STAT3 has been reported to promote the proliferation, survival, metastasis, immune escape, as well as drug resistance of cancer cells, making it a promising target for various diseases. However, though multiple STAT3 inhibitors and its regulatory or effector pathway elements have been identified, bioactive agents are limited.

In vitro: Previous study showed that APTSTAT3-9R bound to STAT3 with high specificity and affinity. Moreover, the addition of a cell-penetrating motif to the peptide to yield APTSTAT3-9R enabled uptake by murine B16F1 melanoma cells. In addition, treatment of various types of cancer cells with APTSTAT3-9R was able to inhibit STAT3 phosphorylation and reduce expression of STAT targets, such as Bcl-xL, cyclin D1, and survivin. As a result, APTSTAT3-9R could suppress the viability and proliferation of cancer cells [1].

In vivo: In a previous animal in vivo study, a human lung carcinoma xenograft model was prepared by subcutaneous implantation of A549 cancer cells. After tumors had reached a volume of approximately 50 mm³ after two weeks, APTSTAT3-9R was intratumorally injected every other day for a total of four injections. Results showed that the tumor burden was significantly reduced in the APTSTAT3-9R-treated group when compared with that in the control group; however, there was little difference in tumor size between APTscr-9R and control groups [1].

Clinical trial: Up to now, ALTSTADT3-9R is still in the preclinical development stage.

Reference:

[1] Kim D, Lee IH, Kim S, Choi M, Kim H, Ahn S, Saw PE, Jeon H, Lee Y, Jon S. A specific STAT3-binding peptide exerts antiproliferative effects and antitumor activity by inhibiting STAT3 phosphorylation and signaling. *Cancer Res.* 2014 Apr 15;74(8):2144-51.

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

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