APTSTAT3-9R

Cat. No.:	HY-P2282
Molecular Formula:	$C_{223}H_{330}N_{80}O_{51}$
Molecular Weight:	4947.51
Sequence:	His-Gly-Phe-Gln-Trp-Pro-Gly-Ser-Trp-Thr-Trp-Glu-Asn-Gly-Lys-Trp-Thr-Trp-Lys-Gly-Ala-Tyr-Gln-Phe-Leu-Lys-Gly-Gly-Gly-Gly-Ser-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg
Sequence Shortening:	HGFQWPGSWTWENGKWTWKGAYQFLKGGGGSRRRRRRRRR
Target:	STAT
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt
Storage:	Sealed storage, away from moisture and light, under nitrogen Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

BIOLOGICAL ACTIVITY

Description	APTSTAT3-9R, a specific STAT3-binding peptide, inhibits STAT3 activation and downstream signaling by specifically blocking STAT3 phosphorylation. APTSTAT3-9R exerts antiproliferative effects and antitumor activity[1].
IC_{50} & Target	STAT3
In Vitro	APTSTAT3-9R (7.5, 15, and 30 μmol/L; 6 hours) significantly reduces STAT3–DNA-binding activity in a dose-dependent manner in human lung carcinoma cells (A549)[1]. APTSTAT3-9R (30 μM; for 2 weeks) suppresses cell viability and proliferation of cancer cells and significantly suppresses colony formation. APTSTAT3-9R has IC50s of 10 to 20 μM in A549, B16F1 and HepG2 cells[1]. APTSTAT3-9R (7.5, 15, and 30 μmol/L; 6 hours) effectively inhibits phosphorylation of STAT3 but does not affect the level of AKT phosphorylation, indicating specificity of the aptide[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	APTSTAT3-9R (8 mg/kg in 50 μL; intratumorally injected every other day for a total of four injections) suppresses tumor growth in 6-week-old female BALB/c nude mice with A549 cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Arch Oral Biol. 2022: 105586.

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REFERENCES

[1]. Daejin Kim, et al. 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.

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