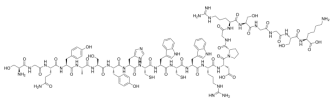
TPP-1

Cat. No.:	HY-P3139
CAS No.:	2426685-25-6
Molecular Formula:	$C_{107}H_{150}N_{34}O_{32}S_2$
Molecular Weight:	2488.67
Sequence Shortening:	SGQYASYHCWCWRDPGRSGGSK
Target:	PD-1/PD-L1
Pathway:	Immunology/Inflammation
Storage:	Sealed storage, away from moisture Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 50 mg/mL (20.09 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.4018 mL	2.0091 mL	4.0182 mL
	5 mM	0.0804 mL	0.4018 mL	0.8036 mL
	10 mM	0.0402 mL	0.2009 mL	0.4018 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

TPP-1 is a potent inhibitor of the PD-1/PD-L1 interaction. TPP-1 binds specifically to PD-L1 with a high affinity (K_D=95 nM). TPP-1 inhibits human tumor growth in vivo via reactivating T-cell function[1].

In Vitro

TPP-1 binds to PD-L1 with high affinity and blocks PD-1/PD-L1 interaction. The K_D value of PD-L1 with TPP-1 peptide is about 95 nmol/L (around five times less than that with PD-1), The binding site of TPP-1 to PD-L1 is close to the interactive site of PD-1 and PD-L1[1].

TPP-1 (4 μM) reactivates T-cell functions, it induces IFNγ release significantly higher than control and SPP-1, and the TPP-1 group shows similar outcomes for cell proliferation[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

TPP-1 (subcutaneous injection; 4 mg/kg; every other day eight times; 32 days) inhibits tumor growth (compared with SPP-1 and control). The growth rate in TPP-1-treated mice is 56%. And when administered in the absence of T cells (control group), TPP-1 has no effect on the growth of the H460-luc tumors[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	5 to 6-week-old female Balb/c nude mice injected with H460 cells transfected with the plvx-puro/luciferase lentiviral vector[1]
Dosage:	4 mg/kg
Administration:	Subcutaneous injection; 4 mg/kg; every other day eight times; 32days
Result:	Inhibited the tumor growth in a tumor xenograft model via reactivating T-cell function.

REFERENCES

[1]. Chunlin Li, et al. Peptide Blocking of PD-1/PD-L1 Interaction for Cancer Immunotherapy. Cancer Immunol Res. 2018 Feb;6(2):178-188.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA