(D)-PPA 1

Cat. No.:	HY-P4072
CAS No.:	1620813-53-7
Molecular Formula:	$C_{70}H_{98}N_{20}O_{21}$
Molecular Weight:	1555.65
Sequence:	D-{Asn-Tyr-Ser-Lys-Pro-Thr-Asp-Arg-Gln-Tyr-His-Phe}
Sequence Shortening:	D-{NYSKPTDRQYHF}
Target:	PD-1/PD-L1
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

(D)-PPA 1 is a hydrolysisresistant d-peptide antagonist. (D)-PPA 1 serves as a potent PD-1/PD-L1 inhibitor. (D)-PPA 1 binds to PD-1 with the affinity 0f 0.51 μM with in vitro and in vivo efficacy[1].

In Vitro

(D)-PPA 1 (0.2 mg/mL, 1.0 mg/mL) blocks the interaction between PD-1/PD-L1 at 1.0 mg/mL[1].
(D)-PPA 1 (3.125-100 μM; 24 h, 48 h) doesn't kill tumor cells directly with no affect on CT26 cells growth[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	CT26 cells
Concentration:	3.125, 6.25, 12.5, 25, 50, and 100 μM
Incubation Time:	24 hours, 48 hours
Result:	Left tumor cells growing normally.

In Vivo

(D)-PPA 1 (2 mg/kg; s.c. or i.p.; once daily for 7 d) inhibits CT26 tumor growth in vivo in mice[1].
(D)-PPA 1 (40 μg/mouse in 200 μL; i.v.; single dose) has the ability to target to tumor tissue in CT26-tumor-bearing mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	CT26-tumor-bearing Balb/c mice[1]
Dosage:	2 mg/kg
Administration:	1) Subcutaneous injection, for around the tumor once every day for 7 days 2) Intraperitoneal injection, once every day for 7 days3) Intraperitoneal injection, once every day for 12 days; recorded the survival on day 13
Result:	Inhibited tumor growth, and prolonged the survival in mice.

REFERENCES

[1]. Chang HN, et al. Blocking of the PD-1/PD-L1 Interaction by a D-Peptide Antagonist for Cancer Immunotherapy. Angew Chem Int Ed Engl. 2015 Sep 28;54(40):11760-4.

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