

## Penpulimab

<b>Cat. No.:</b>	HY-P99108
<b>CAS No.:</b>	2350298-92-7
<b>Target:</b>	PD-1/PD-L1
<b>Pathway:</b>	Immunology/Inflammation
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Penpulimab is an IgG1 backbone anti-PD-1 monoclonal antibody with antitumor activities <sup>[1]</sup> .									
<b>In Vitro</b>	<p>Penpulimab demonstrates better stability and a lower level of host-cell protein residue compared with IgG4 backbone anti-PD-1 antibodies<sup>[1]</sup>.</p> <p>Penpulimab does not mediate complement-dependent cytotoxicity (CDC) or antibody-dependent cell-mediated cytotoxicity (ADCC) and induces no remarkable IL-6 and IL-8 release by activated macrophages<sup>[1]</sup>.</p> <p>Penpulimab exhibits slower binding off-rate for human PD-1 than Nivolumab (HY-P9903) and Pembrolizumab (HY-P9902)<sup>[1]</sup>.</p> <p>Penpulimab potentiates T cell activation via PD-1/PD-L1 blockade<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>									
<b>In Vivo</b>	<p>Penpulimab (5 mg/kg; i.p.; twice a week, 3weeks) inhibits tumor growth in mice<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>MC38-hPD-L1 tumor-bearing B-hPD-1 humanized mouse model<sup>[2]</sup></td> </tr> <tr> <td>Dosage:</td> <td>5 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>IP, twice a week, 3weeks</td> </tr> <tr> <td>Result:</td> <td>           Showed moderate inhibition of tumor growth (tumor volume: 58.4% of control group).            Treatment combined with anlotinib (1 mg/kg, every day, p.o) significantly decreased tumor volume to 36.5% of control group.         </td> </tr> </table>		Animal Model:	MC38-hPD-L1 tumor-bearing B-hPD-1 humanized mouse model <sup>[2]</sup>	Dosage:	5 mg/kg	Administration:	IP, twice a week, 3weeks	Result:	Showed moderate inhibition of tumor growth (tumor volume: 58.4% of control group). Treatment combined with anlotinib (1 mg/kg, every day, p.o) significantly decreased tumor volume to 36.5% of control group.
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### REFERENCES

- [1]. Huang Z, et al. Penpulimab, an Fc-Engineered IgG1 Anti-PD-1 Antibody, With Improved Efficacy and Low Incidence of Immune-Related Adverse Events. *Front Immunol.* 2022 Jun 27;13:924542.
- [2]. Yunlong Shan, et al. Anlotinib enhanced penpulimab efficacy through remodeling of tumor vascular architecture and immune microenvironment in hPD-L1/hPD-1 humanized mouse model. *Journal of Clinical Oncology* 39, no. 15\_suppl (May 20, 2021) 2581-2581.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA