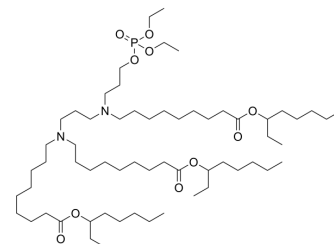


Phospholipid PL1

Cat. No.:	HY-151506
CAS No.:	2274812-94-9
Molecular Formula:	C ₆₁ H ₁₂₁ N ₂ O ₁₀ P
Molecular Weight:	1073.59
Target:	Liposome
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Phospholipid PL1 is a phospholipid-derived nanoparticle, can deliver costimulatory receptor mRNA (CD137 or OX40) to T cells. Phospholipid PL1 could induce the activation of various immune cells, including T cells and dendritic cells (DCs) in order to boost antitumor immunity ^[1] .																
In Vivo	<p>Phospholipid PL1 (10 µg mRNA/mouse; i.t.; 6 times every other day; for 60 d) improves the immunotherapy with an anti-CD137 Ab and antitumor activity with an anti-OX40 Ab in tumor models with better results obtained in the B16F10 melanoma model than the A20 lymphoma model^[1].</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>B16F10 melanoma mouse model and A20 lymphoma mouse model (C57BL/6 mice)^[1]</td> </tr> <tr> <td>Dosage:</td> <td>Administration of PL1-CD137 + anti-CD137 Ab; PL1-CD137 (10 µg mRNA/mouse), and anti-CD137 Ab (16 µg/mouse)</td> </tr> <tr> <td>Administration:</td> <td>Intratumoral injection; 6 times every other day; 60 days</td> </tr> <tr> <td>Result:</td> <td>Dramatically decreased the tumor growth rate by 5-fold (18 days after inoculation), and increased the overall survival time in B16F10 melanoma model. Resulted in a 2-fold decrease in the tumor growth rate (18d after inoculation) in A20 lymphoma model, without significant extension in the overall survival time.</td> </tr> </table> <table border="1"> <tr> <td>Animal Model:</td> <td>B16F10 melanoma mouse model and CT26 colon carcinoma mouse model (C57BL/6 mice) [1]</td> </tr> <tr> <td>Dosage:</td> <td>Administration of PL1-OX40 + anti-OX40 Ab; PL1-OX40 (10 µg mRNA/mouse), and anti-OX40 Ab (8 µg/mouse)</td> </tr> <tr> <td>Administration:</td> <td>Intratumoral injection; 6 times every other day; 60 days</td> </tr> <tr> <td>Result:</td> <td>Significantly decreased the tumor growth and prolonged survival in comparison to treatment with PBS and PL1-OX40 + anti-OX40 Ab in both tumor models.</td> </tr> </table>	Animal Model:	B16F10 melanoma mouse model and A20 lymphoma mouse model (C57BL/6 mice) ^[1]	Dosage:	Administration of PL1-CD137 + anti-CD137 Ab; PL1-CD137 (10 µg mRNA/mouse), and anti-CD137 Ab (16 µg/mouse)	Administration:	Intratumoral injection; 6 times every other day; 60 days	Result:	Dramatically decreased the tumor growth rate by 5-fold (18 days after inoculation), and increased the overall survival time in B16F10 melanoma model. Resulted in a 2-fold decrease in the tumor growth rate (18d after inoculation) in A20 lymphoma model, without significant extension in the overall survival time.	Animal Model:	B16F10 melanoma mouse model and CT26 colon carcinoma mouse model (C57BL/6 mice) [1]	Dosage:	Administration of PL1-OX40 + anti-OX40 Ab; PL1-OX40 (10 µg mRNA/mouse), and anti-OX40 Ab (8 µg/mouse)	Administration:	Intratumoral injection; 6 times every other day; 60 days	Result:	Significantly decreased the tumor growth and prolonged survival in comparison to treatment with PBS and PL1-OX40 + anti-OX40 Ab in both tumor models.
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REFERENCES

[1]. Li W, et al. Biomimetic nanoparticles deliver mRNAs encoding costimulatory receptors and enhance T cell mediated cancer immunotherapy. Nat Commun. 2021 Dec 14;12(1):7264.

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

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