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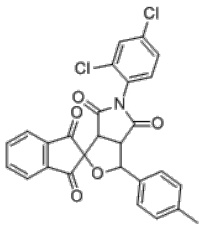
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	Tim-3 inhibitor ML-T7
Cat. No.	:	PC-21328
CAS No.	:	459789-75-4
Molecular Formula	:	$C_{27}H_{17}Cl_2NO_5$
Molecular Weight	:	506.34
Target	:	Immune Checkpoints
Solubility	:	10 mM in DMSO



CAS: 459789-75-4

Biological Activity

Tim-3 inhibitor ML-T7 is a potent small molecule inhibitor of T cell immunoglobulin and mucin-containing molecule 3 (**Tim-3**), binds to Tim-3 disrupts the interaction of Tim-3 with PtdSer and CEACAM1.
ML-T7 targets the FG-CC' cleft of Tim-3, a highly conserved binding site of phosphatidylserine (PtdSer) and carcinoembryonic antigen–related cell adhesion molecule 1 (CEACAM1).
ML-T7 binds to hTim-3 and mTim-3 with Kd (dissociation constant) values of 6.98 and 7.40 μM, respectively.
ML-T7 blocks hTim-3 binding to CEACAM1-overexpressing Jurkat cells in a concentration-dependent manner and directly disrupts CEACAM1 binding to hTim-3 in SPR assay.
ML-T7 does not block Tim-3/galectin-9 interaction.
ML-T7 enhances TCR/STAT5 signaling and promotes CD8+ T cell antitumor activity through Tim-3.
ML-T7 directly potentiates the survival and prevents exhaustion of CD8+ cytotoxic T lymphocytes (CTLs), potentiates functions of DCs through both Tim-3 and Tim-4.
ML-T7 (50 mg/kg) exerts antitumor activity in preclinical syngeneic mouse models and humanized mice, potentiates anti–PD-1 therapy in vivo.

References

Ma S, et al. ***Sci Transl Med.*** 2023 Nov 15;15(722):eadg6752.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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