



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

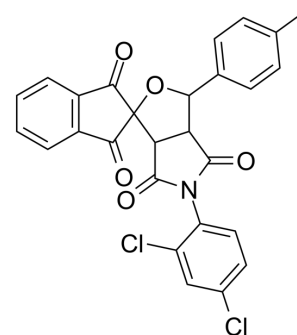
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## ML-T7

<b>Cat. No.:</b>	HY-163028		
<b>CAS No.:</b>	459789-75-4		
<b>Molecular Formula:</b>	C <sub>27</sub> H <sub>17</sub> Cl <sub>2</sub> NO <sub>5</sub>		
<b>Molecular Weight:</b>	506.33		
<b>Target:</b>	Tim3		
<b>Pathway:</b>	Immunology/Inflammation		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 69.5 mg/mL (137.26 mM; ultrasonic and warming and heat to 60°C)

Concentration	Mass		
	1 mg	5 mg	10 mg
<b>1 mM</b>	1.9750 mL	9.8750 mL	19.7500 mL
<b>5 mM</b>	0.3950 mL	1.9750 mL	3.9500 mL
<b>10 mM</b>	0.1975 mL	0.9875 mL	1.9750 mL

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

### BIOLOGICAL ACTIVITY

#### Description

ML-T7 is a potent Tim-3 inhibitor. ML-T7 blocks Tim-3 interactions with PtdSer and CEACAM1. ML-T7 not only enhances the antitumor activity of adoptive transfer therapy with cytotoxic T lymphocytes (CTLs) and CAR T cells but also increases the effector function of T cell. ML-T7 promotes NK cells' killing activity against tumor cells and DC antigen-presenting capacity. ML-T7 directly exerts antitumor efficacy in preclinical tumor models either alone or in combination with Nivolumab (HY-P9903A). ML-T7 can be used for tumor immunotherapy research<sup>[1]</sup>.

#### In Vitro

ML-T7 (10 μM, 0-6 days) enhances TCR/STAT5 signaling and promotes CD8<sup>+</sup> cell antitumor activity through Tim-3<sup>[1]</sup>.  
 ML-T7 (10 μM, 24 h) promotes DC maturation and function through Tim-3 and Tim-4, enhances DC antigen-presenting ability<sup>[1]</sup>.  
 ML-T7 (10 μM, 24 h) enhances CTL activation and cytokine production, decreases apoptosis of CTLs<sup>[1]</sup>.  
 ML-T7 (10 μM, 48 h) significantly enhances the production of IFN-γ, TNF-α, CD107a, and granzyme B in human NK cell line NK92 cells<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.  
 Western Blot Analysis<sup>[1]</sup>

Cell Line:	CD8 <sup>+</sup> cell
Concentration:	10 μM
Incubation Time:	0-6 days
Result:	Increased the phosphorylation of phospholipase C-γ1(PLC-γ1), ZAP70, LCK, ERK1/2, and STAT5 upon anti-CD3/CD28 stimulation.
Cell Invasion Assay <sup>[1]</sup>	
Cell Line:	Bone Marrow Cells
Concentration:	10 μM
Incubation Time:	24 h
Result:	Increased the expression of DC maturation markers.

<b>In Vivo</b>	<p>ML-T7 (10-50 mg/kg; Intraperitoneal injection; every 2 days, 10 times) inhibits the growth of tumor and prolongs survival of HCC mice, without adverse effects on mice body weight<sup>[1]</sup>.</p> <p>ML-T7 (20 mg/kg; Intraperitoneal injection; every 2 days, 10 times) synergizes with Nivolumab (HY-P9903A) to improve the antitumor efficacy of Nivolumab (HY-P9903A) antibodies, and effectively improves HCC mice survival<sup>[1]</sup>.</p> <p>ML-T7 (50 mg/kg, Intraperitoneal injection; every 2 days for 3 weeks) shows a good safety profile in mice<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
	Animal Model:	10-week-old mice with spontaneous orthotopic HCC <sup>[1]</sup>
	Dosage:	10-50 mg/kg
	Administration:	Intraperitoneal injection (i.p.), every 2 days, 10 times
	Result:	Increased CD8 <sup>+</sup> T cells in both tumor and spleen. Inhibited T cell exhaustion. Promoted the function of CTLs, NK cells, and DCs.
	Animal Model:	10-week-old mice with orthotopic Akt/c-Myc HCC <sup>[1]</sup>
	Dosage:	20 mg/kg
	Administration:	Intraperitoneal injection (i.p.), every 2 days, 10 times
	Result:	Indicated stronger antitumor activity when treated with ML-T7 and Nivolumab (HY-P9903A). Rejuvenated NK cells by the combination therapy. Inhibited the accumulation of MDSCs and Tregs.

## REFERENCES

[1]. Ma S, et al. Identification of a small-molecule Tim-3 inhibitor to potentiate T cell-mediated antitumor immunotherapy in preclinical mouse models. *Sci Transl Med*. 2023 Nov 15;15(722):eadg6752.

---

**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