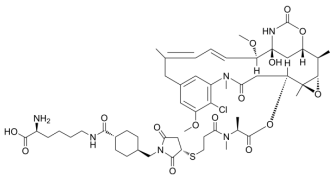
Lys-SMCC-DM1

Cat. No.:	HY-101982
CAS No.:	1281816-04-3
Molecular Formula:	$C_{53}H_{75}ClN_6O_{15}S$
Molecular Weight:	1103.71
Target:	Drug-Linker Conjugates for ADC
Pathway:	Antibody-drug Conjugate/ADC Related
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (90.60 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.9060 mL	4.5302 mL	9.0604 mL
	5 mM	0.1812 mL	0.9060 mL	1.8121 mL
	10 mM	0.0906 mL	0.4530 mL	0.9060 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.27 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.27 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.27 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lys-SMCC-DM1 (Lys-Nε-MCC-DM1) is a agent-linker conjugates for ADC that can inhibit tubulin polymerization. Lys-SMCC-DM1 is the active metabolite of T-DM1. T-DM1 is a HER2-targeting ADC with a tubulin polymerization inhibitor DM1. Lys-SMCC-DM1 can be used in the research of breast cancer[1][2].

IC_{50} & Target

Maytansinoids

In Vitro

Lys-SMCC-DM1 possess a low level of permeability[1].
Lys-SMCC-DM1 shows cytotoxicity in KPL-4 and MDA-MB-468 cells, with IC_{50} of 24.8 nM and 40.5 nM respectively[2].
Lys-SMCC-DM1 (200 μM) inhibits the SLC46A3-mediated uptake of estrone 3-sulfate in MDCKII/SLC46A3 dC cells[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Tomabechi R, et al. Identification of 5-Carboxyfluorescein as a Probe Substrate of SLC46A3 and Its Application in a Fluorescence-Based In Vitro Assay Evaluating the Interaction with SLC46A3. Mol Pharm. 2022 Dec 2.

[2]. Ogitani Y, et al. Bystander killing effect of DS-8201a, a novel anti-human epidermal growth factor receptor 2 antibody-drug conjugate, in tumors with human epidermal growth factor receptor 2 heterogeneity. Cancer Sci. 2016 Jul;107(7):1039-46.

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