Sulfo-SMCC sodium

Cat. No.: HY-D0975

CAS No.: 92921-24-9

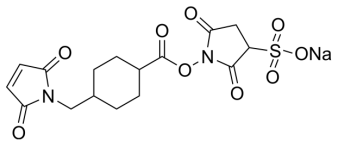
Molecular Formula: $C_{16}H_{17}N_2NaO_9S$

Molecular Weight: 436.37

Target: ADC Linker

Pathway: Antibody-drug Conjugate/ADC Related

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (286.45 mM; Need ultrasonic)

H_2O : 5 mg/mL (11.46 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2916 mL	11.4582 mL	22.9163 mL
5 mM	0.4583 mL	2.2916 mL	4.5833 mL
10 mM	0.2292 mL	1.1458 mL	2.2916 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 4.17 mg/mL (9.56 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.77 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.77 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.77 mM); Clear solution

BIOLOGICAL ACTIVITY

Description Sulfo-SMCC sodium is a commonly used hetero-bifunctional, noncleavable ADC crosslinker bearing N-hydroxysuccinimide (NHS) ester and maleimide groups to react with primary amines and sulfhydryl groups, respectively.

IC_{50} & Target Non-cleavable Linker

In Vitro	The crosslinker Sulfo-SMCC consists of a maleimide and an N-hydroxysuccinimide ester group to bind to sulfhydryl groups and primary amines, respectively. Sulfo-SMCC inhibits the end-to-end annealing of stabilized Microtubules (MTs). MTs are treated with 250 μM Sulfo-SMCC, and imaged after incubation for 0 h, 6 h, and 24 h.? MTs treated with Sulfo-SMCC shows a constant mean length, independent of the incubation time[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]	Labeled and unlabeled porcine tubulin powders are used. Sulfo-SMCC is used. MTs are polymerized to a final concentration of 2 mg/mL in 80 mM PIPES buffer (pH 6.8) containing 10 μM taxol, 2 mM $MgCl_2$, 0.5 mM EGTA, and 1 mM GTP. A mixture of rhodamine-labeled tubulin and unlabeled tubulin (1:5) is used in the time-dependent measurements. In these experiments, polymerized MTs are divided in 2 groups: control and Sulfo-SMCC (250 μM) treated. Both samples are imaged after diluting 1:5 and incubating for 0 h (within 45 minutes after polymerization), 6 h, and 24 h[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- BMC Med. 2022 Aug 24;20(1):257
- Microb Cell Fact. 2021 Mar 10;20(1):67.
- Commun Biol. 2023 Oct 4;6(1):1008.

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REFERENCES

[1]. Prabhune M, et al. Sulfo-SMCC Prevents Annealing of Taxol-Stabilized Microtubules In Vitro. PLoS One. 2016 Aug 25;11(8):e0161623.

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

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