N-Butanoyl-L-homoserine lactone

Cat. No.: HY-114816

CAS No.: 67605-85-0

Molecular Formula: $C_8H_{13}NO_3$

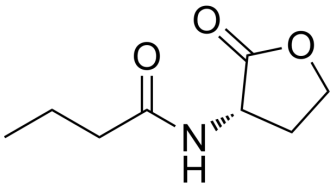
Molecular Weight: 171.19

Target: ADC Linker; Bacterial

Pathway: Antibody-drug Conjugate/ADC Related; Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (584.15 mM; Need ultrasonic)

H_2O : 20 mg/mL (116.83 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	5.8415 mL	29.2073 mL	58.4146 mL
	5 mM	1.1683 mL	5.8415 mL	11.6829 mL
	10 mM	0.5841 mL	2.9207 mL	5.8415 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 (14.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (14.60 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (14.60 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

N-Butanoyl-L-homoserine lactone (C4-HSL) is a cleavable ADC linker used in the synthesis of antibody-drug conjugates (ADCs). N-Butanoyl-L-homoserine lactone has antibacterial activity and is used in antibacterial biofilm[1]. N-Butanoyl-L-homoserine lactone aptamers blocks qurom sensing and inhibits biofilm formation in Pseudomonas aeruginosa[2][3].

IC_{50} & Target

Cleavable

In Vitro	The dissociation constant (K_d value) of aptamer binding to N-Butanoyl-L-homoserine lactone (C4-HSL) is 28.47 nM[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Keith Alan Charlton, et al. Methods for the Treatment of an Infectious Bacterial Disease with an Anti-Lactone or Lactone Derived Signal Molecules Antibody. US20130045208A1

[2]. Zhao M, et al. C4-HSL aptamers for blocking qurom sensing and inhibiting biofilm formation in Pseudomonas aeruginosa and its structure prediction and analysis. PLoS One. 2019 Feb 19;14(2):e0212041.

[3]. Feng Sun, et al. Advance of the diversity of bacterial quorum sensing and quorum quenching. National Natural Science Foundation of China. Published online 9 October 2018.

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

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