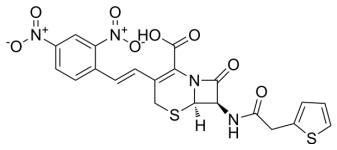
Nitrocefin

Cat. No.:	HY-108913
CAS No.:	41906-86-9
Molecular Formula:	$C_{21}H_{16}N_4O_8S_2$
Molecular Weight:	516.5
Target:	Antibiotic; Beta-lactamase
Pathway:	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 (193.61 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9361 mL	9.6805 mL	19.3611 mL
5 mM	0.3872 mL	1.9361 mL	3.8722 mL
10 mM	0.1936 mL	0.9681 mL	1.9361 mL

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

BIOLOGICAL ACTIVITY

Description

Nitrocefin is a chromogenic β-lactamase substrate that undergoes a distinctive color change from yellow to red as the amide bond in the β-lactam ring is hydrolyzed by β-lactamase. Nitrocefin is used in competitive inhibition studies in developmental work on β-lactamase-resistant antibiotics[1][2][3].

IC_{50} & Target

β-lactam

REFERENCES

[1]. Lee M, et al. A practical synthesis of nitrocefin. J Org Chem. 2005 Jan 7;70(1):367-9.

[2]. Worthington RJ, et al. Overcoming resistance to β-lactam antibiotics. J Org Chem. 2013 May 3;78(9):4207-13.

[3]. O'Callaghan CH, et al. Novel method for detection of beta-lactamases by using a chromogenic cephalosporin substrate. Antimicrob Agents Chemother. 1972 Apr;1(4):283-8.

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

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