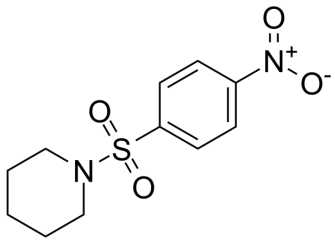
VP-4604

Cat. No.:	HY-115965
CAS No.:	64268-93-5
Molecular Formula:	$C_{11}H_{14}N_2O_4S$
Molecular Weight:	270.3
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (92.49 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	3.6996 mL	18.4980 mL	36.9959 mL
	5 mM	0.7399 mL	3.6996 mL	7.3992 mL
	10 mM	0.3700 mL	1.8498 mL	3.6996 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (9.25 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

VP-4604 is a potent anti-methicillin-resistant Staphylococcus aureus (MRSA) agent. VP-4604 exhibits significant microbial growth inhibition toward Staphylococcus aureus (ATCC 43300) with MIC of 4-8 μg/mL. VP-4604 inhibits the growth of methicillin‐resistant Staphylococcus aureus with growth inhibition >95%[1].

In Vitro

VP-4604 (2.5 mM, 18 hours) inhibits drug-resistant ***S. aureus*** and P. aeruginosa with growth inhibiton (%) GI >95%[1].
VP-4604 shows low cytotoxicity with a CC_{50} value >118.4 mM towards HEK-293 (human embryonic kidney) ATCC CRL‐1573 and an HC_{10} vaule >118.4 μM towards RBC (human red blood cells) [1].
VP-4604 (2.5 mM) is tolerated by mammalian cells (HaCaT, lymphocytes) with the inhibition growth (%) of 44.1% and >50%, respectively[1].

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

Cell Proliferation Assay[1]

Cell Line:	S. aureus ATCC25923, P. aeruginosa ATCC9027

Concentration:	0.625 mM, 1.25 mM, 2.5 mM
Incubation Time:	18 hours
Result:	Showed antibacterial effect.

Cell Cytotoxicity Assay[1]

Cell Line:	HaCaT line (human keratinocytes), lymphocytes (from healthy adult human peripheral blood)
Concentration:	0, 1, 10, 100, 1000, 2500 μM
Incubation Time:	48 or 72 hours
Result:	Showed low toxicity towards mammalian cells.

REFERENCES

[1]. Vitalii Palchykov, et al. Antimicrobial action of arylsulfonamides bearing (aza)norbornane and related motifs: evaluation of new promising anti-MRSA agents. Medicinal Chemistry Research. 2022. 31: 284-292.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA