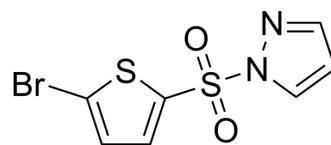


## Qstatin

Cat. No.:	HY-124796
CAS No.:	902688-24-8
Molecular Formula:	C <sub>7</sub> H <sub>3</sub> BrN <sub>2</sub> O <sub>2</sub> S <sub>2</sub>
Molecular Weight:	293.16
Target:	Bacterial
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 : 83.33 mg/mL (284.25 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	3.4111 mL	17.0555 mL	34.1111 mL
		5 mM	0.6822 mL	3.4111 mL	6.8222 mL
	10 mM	0.3411 mL	1.7056 mL	3.4111 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: ≥ 2.08 mg/mL (7.10 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (7.10 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (7.10 mM); Clear solution				

### BIOLOGICAL ACTIVITY

Description	Qstatin is a potent and selective inhibitor of SmcR ( <i>V. harveyi</i> LuxR homologue) with an EC <sub>50</sub> of 208.9 nM, binding tightly to SmcR and changes the flexibility of the protein, thereby altering its transcription regulatory activity. Qstatin shows pan-QS (Vibrio quorum sensing) inhibitor activity in diverse <i>Vibrio</i> species and attenuates their virulence in an aquatic host. Qstatin may be a sustainable antibiosis agent useful in aquacultures <sup>[1]</sup> .
In Vitro	Qstatin (0.001 μM-10 μM; 5 hours) inhibits SmcR activity measured by the RLU level for <i>V. vulnificus</i> WT (pBB1), reveals EC <sub>50</sub> of 208.9 nM <sup>[1]</sup> . Qstatin (5 μM-50 μM; 16 hours) reduces the activities of SmcR-activated virulence factors (protease and elastase) in <i>V. vulnificus</i> in a dose dependent manner <sup>[1]</sup> .

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QStatin (5  $\mu$ M-50  $\mu$ M; 16 hours) has no effect on the cellular levels of SmcR, indicating that QStatin does not affect the expression or stability of SmcR<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

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[1]. Kim BS, et al. QStatin, a Selective Inhibitor of Quorum Sensing in *Vibrio* Species. MBio. 2018 Jan 30;9(1). pii: e02262-17.

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

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