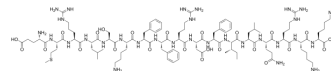


## CSP1

**Cat. No.:** HY-P2454  
**CAS No.:** 172889-49-5  
**Molecular Formula:** C<sub>103</sub>H<sub>168</sub>N<sub>30</sub>O<sub>24</sub>S  
**Molecular Weight:** 2242.69  
**Sequence Shortening:** EMRLSKFFRDFILQRKK  
**Target:** Bacterial  
**Pathway:** Anti-infection  
**Storage:** Sealed storage, away from moisture  
 Powder    -80°C    2 years  
              -20°C    1 year



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

### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 100 mg/mL (44.59 mM); Need ultrasonic					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		0.4459 mL	2.2295 mL	4.4589 mL
		<b>5 mM</b>		0.0892 mL	0.4459 mL	0.8918 mL
	<b>10 mM</b>		0.0446 mL	0.2229 mL	0.4459 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 50 mg/mL (22.29 mM); Clear solution; Need ultrasonic					

### BIOLOGICAL ACTIVITY

<b>Description</b>	CSP1 is a potent and selective ComD1 receptor agonist, with an IC <sub>50</sub> of 10.3 nM. CSP1 is a major variants of competence-stimulating peptide (CSP), and it can regulate genetic transformation of <i>S. pneumonia</i> by modulating quorum sensing (QS). CSP1 can act as an antibacterial agent <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 10.3 nM (ComD1 receptor) <sup>[1]</sup>

### REFERENCES

[1]. Yang Y, et, al. Structural Characterization of Competence-Stimulating Peptide Analogues Reveals Key Features for ComD1 and ComD2 Receptor Binding in *Streptococcus pneumonia*. *Biochemistry*. 2018 Sep 11;57(36):5359-5369.

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[2]. Johnsborg O, et, al. A hydrophobic patch in the competence-stimulating Peptide, a pneumococcal competence pheromone, is essential for specificity and biological activity. J Bacteriol. 2006 Mar; 188(5): 1744-9.

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

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