



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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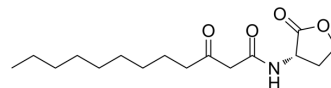
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## N-3-oxo-dodecanoyl-L-homoserine lactone

**Cat. No.:** HY-114544A  
**CAS No.:** 168982-69-2  
**Molecular Formula:** C<sub>16</sub>H<sub>27</sub>NO<sub>4</sub>  
**Molecular Weight:** 297.39  
**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 : 100 mg/mL (336.26 mM; Need ultrasonic)  
 H<sub>2</sub>O : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)

|                              | Solvent<br>Concentration | Mass | 1 mg      | 5 mg       | 10 mg      |
|------------------------------|--------------------------|------|-----------|------------|------------|
|                              |                          |      |           |            |            |
| Preparing<br>Stock Solutions | 1 mM                     |      | 3.3626 mL | 16.8129 mL | 33.6259 mL |
|                              | 5 mM                     |      | 0.6725 mL | 3.3626 mL  | 6.7252 mL  |
|                              | 10 mM                    |      | 0.3363 mL | 1.6813 mL  | 3.3626 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 (8.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (8.41 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (8.41 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

N-3-oxo-dodecanoyl-L-Homoserine lactone (3-oxo-C12-HSL) is a bacterial quorum-sensing signaling molecule produced by *P. aeruginosa* and strains of the *B. cepacia* complex<sup>[1][2]</sup>. Quorum sensing is a regulatory system used by bacteria for controlling gene expression in response to increasing cell density. N-3-oxo-dodecanoyl-L-Homoserine lactone induces the production of IL-8 in 16HBE human bronchial epithelial cells<sup>[3]</sup>.

### REFERENCES

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- [1]. Pearson JP, Gray KM, Passador L, Tucker KD, Eberhard A, Iglewski BH, Greenberg EP. Structure of the autoinducer required for expression of *Pseudomonas aeruginosa* virulence genes. *Proc Natl Acad Sci U S A*. 1994 Jan 4;91(1):197-201.
- [2]. Chambers CE, Visser MB, Schwab U, Sokol PA. Identification of N-acylhomoserine lactones in mucopurulent respiratory secretions from cystic fibrosis patients. *FEMS Microbiol Lett*. 2005 Mar 15;244(2):297-304.
- [3]. Smith RS, Fedyk ER, Springer TA, Mukaida N, Iglewski BH, Phipps RP. IL-8 production in human lung fibroblasts and epithelial cells activated by the *Pseudomonas* autoinducer N-3-oxododecanoyl homoserine lactone is transcriptionally regulated by NF-kappa B a
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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