

## Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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### Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

#### SZABO-SCANDIC HandelsgmbH

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# **PRODUCT** INFORMATION



#### 1,2-Dioleoyl-sn-glycero-3-PG (sodium salt)

Item No. 15424

| CAS Registry No.:   | 41906-86-9                           |      |        |              |
|---|--------------------------------------|------|--------|--------------|
| Formal Name:  | (6R)-3-[(1E)-2-(2,4-dinitrophenyl)   |      |        |              |
|   | ethenyl]-8-oxo-7R-[(2-thienylacetyl) |      |        |              |
|   | amino]-5-thia-1-azabicyclo[4.2.0]    | H    | н      |              |
|   | oct-2-ene-2-carboxylic acid          | 0, Ň | s<br>s | NOa          |
| Synonyms:   | Nitrocephin                          |      |        |              |
| MF:   | $C_{21}H_{14}N_4O_8S_2$              | ,s O |        | $\checkmark$ |
| FW:   | 516.5                                |      |        |              |
| Purity:   | ≥90%                                 |      | но     | NOa          |
| UV/Vis.:  | λ <sub>max</sub> : 231, 286, 379 nm  |      |        |              |
| Supplied as:  | A crystalline solid                  |      |        |              |
| Storage:  | -20°C                                |      |        |              |
| Stability:  | ≥2 years                             |      |        |              |
| Information represents the product energifications. Batch energific analytical results are provided on each contificate of analytic |                                      |      |        |              |

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

#### Laboratory Procedures

Nitrocefin is supplied as a crystalline solid. A stock solution may be made by dissolving the nitrocefin in the solvent of choice. Nitrocefin is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of nitrocefin in these solvents is approximately 30 mg/ml.

Nitrocefin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, nitrocefin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Nitrocefin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

#### Description

The generation of  $\beta$ -lactamases by bacteria affords resistance to several classes of  $\beta$ -lactam antibiotics, including penicillins and cephalosporins.<sup>1</sup> Nitrocefin is a chromogenic cephalosporin substrate commonly used to detect  $\beta$ -lactamases in bacteria.<sup>2-4</sup> The presence of  $\beta$ -lactamase activity is indicated by the appearance of a red color that is proportional in intensity to the original concentration of nitrocefin.<sup>2</sup>

#### References

- 1. Worthington, R.J. and Melander, C. Overcoming resistance to β-lactam antibiotics. J. Org. Chem. 78(9), 4207-4213 (2013).
- 2. O'Callaghan, C.H., Morris, A., Kirby, S.M., et al. Novel method for detection of β-lactamases by using a chromogenic cephalosporin substrate. Antimicrob. Agents Chemother. 1(4), 283-288 (1972).
- Parr, T.R., Jr., Pai, C.H., and Bryan, L.E. Simple screening method for β-lactamase-positive and -negative 3. ampicillin-resistant Haemophilus influenzae isolates. J. Clin. Microbiol. 20(1), 131-132 (1984).
- 4. Coudron, P.E., Moland, E.S., and Sanders, C.C. Occurrence and detection of extended-spectrum β-lactamases in members of the family Enterobacteriaceae at a veterans medical center: Seek and you may find. J. Clin. Microbiol. 35(10), 2593-2597 (1997).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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