

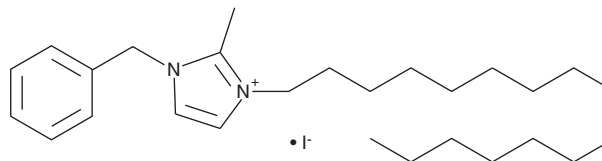
PRODUCT INFORMATION



NH125

Item No. 10011250

CAS Registry No.: 278603-08-0
Formal Name: 1-hexadecyl-2-methyl-3-(phenylmethyl)-1H-imidazolium-iodide
MF: C₂₇H₄₅IN₂
FW: 524.6
Purity: ≥95%
UV/Vis.: λ_{max}: 214 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

NH125 is supplied as a crystalline solid. A stock solution may be made by dissolving the NH125 in the solvent of choice, which should be purged with an inert gas. NH125 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NH125 in these solvents is approximately 5, 2.5, and 15 mg/ml, respectively.

NH125 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NH125 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. NH125 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NH125 is an imidazole that has potent antibacterial properties in drug-resistant bacteria.¹ In bacteria, NH125 inhibits several histidine kinases, inhibiting YycG with an IC₅₀ of 6.6 μM.² NH125 also decreases the viability of several cancer cell lines with IC₅₀ values ranging from 0.7-4.7 μM.³ In mammalian cells, NH125 strongly inhibits eEF-2K (IC₅₀ = 60 nM), with weaker effects on protein kinase C (IC₅₀ = 7.5 μM), protein kinase A (IC₅₀ = 80 μM), and calmodulin-dependent kinase II (IC₅₀ = 100 μM).³

References

1. Yamamoto, K., Kitayama, T., Ishida, N., *et al.* Identification and characterization of a potent antibacterial agent, NH125 against drug-resistant bacteria. *Biosci. Biotechnol. Biochem.* **64(4)**, 919-923 (2000).
2. Yamamoto, K., Kitayama, T., Minagawa, S., *et al.* Antibacterial agents that inhibit histidine protein kinase YycG of *Bacillus subtilis*. *Biosci. Biotechnol. Biochem.* **65(10)**, 2306-2310 (2001).
3. Arora, S., Yang, J.M., Kinzy, T.G., *et al.* Identification and characterization of an inhibitor of eukaryotic elongation factor 2 kinase against human cancer cell lines. *Cancer Res.* **63(20)**, 6894-6899 (2003).

WARNING

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

SAFETY 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/10/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM