

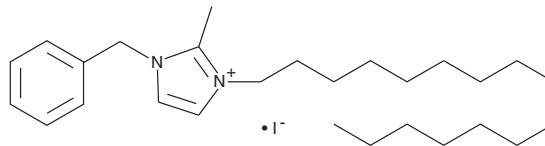
Product Information



NH125

Catalog 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%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: 214 nm



Laboratory Procedures

For long term storage, we suggest that NH125 be stored as supplied at -20°C. It should be stable for at least two years.

NH125 is supplied as a crystalline solid. A stock solution may be made by dissolving the NH125 in an organic solvent purged with an inert gas. NH125 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of NH125 in these solvents is approximately 5.0, 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 ethanol 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.

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 value 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. Biotech. 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**, 6894-6899 (2003).

Related Products

Thiocarlide - Cat. No. 10006976 • Valinomycin - Cat. No. 10009152

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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