

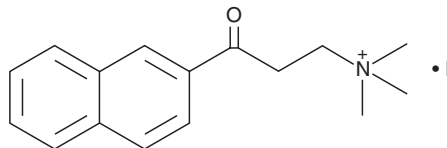
PRODUCT INFORMATION



α -NETA

Item No. 15125

CAS Registry No.: 31059-54-8
Formal Name: N,N,N-trimethyl- γ -oxo-2-naphthalenepropanaminium, monoiodide
MF: C₁₆H₂₀NO • I
FW: 369.2
Purity: \geq 97%
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

α -NETA is supplied as a solid. A stock solution may be made by dissolving the α -NETA in the solvent of choice. α -NETA is soluble in organic solvents such as methanol and DMSO, which should be purged with an inert gas. The solubility of α -NETA in DMSO is approximately 3 mg/ml.

Description

Choline acetyltransferase (ChAT) mediates the synthesis of the neurotransmitter acetylcholine from acetyl-CoA and choline. In addition to its critical role in neurosignaling, deficiencies in ChAT are linked to congenital myasthenic syndromes, Alzheimer's disease, and multiple sclerosis.¹⁻³ α -NETA is a stable, non-competitive, and slowly reversible inhibitor of ChAT (IC₅₀ = 9 μ M).^{4,5} This naturally fluorescent compound is a poor inhibitor of cholinesterases and carnitine acetyltransferase.⁵ α -NETA is commonly used in cells in culture.^{6,7}

References

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5. Sastry, B.V., Jaiswal, N., Janson, V., *et al.* Relationships between chemical structure and inhibition of choline acetyltransferase by 2-(α -naphthoyl)ethyltrimethylammonium and related compounds. *Pharmacol. Res. Commun.* **20(9)**, 751-771 (1988).
6. Eaton, B.M. and Sooranna, S.R. Regulation of the choline transport system in superfused microcarrier cultures of BeWo cells. *Placenta* **19(8)**, 663-669 (1998).
7. Sawatzky, D.A., Kingham, P.J., Durcan, N., *et al.* Eosinophil-induced release of acetylcholine from differentiated cholinergic nerve cells. *Am. J. Physiol. Lung Cell Mol. Physiol.* **285(6)**, L1296-L1304 (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.

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