

Certificate of Analysis

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Product Name: DMAB-anabaseine dihydrochloride

Catalog No.: 2241

Batch No.: 2

CAS Number: 154149-38-9

IUPAC Name: 4-[(5,6-Dihydro[2,3'-bipyridin]-3(4*H*)-ylidene)methyl]-*N,N*-dimethylbenzenamine dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₉H₂₁N₃·2HCl·¾H₂O

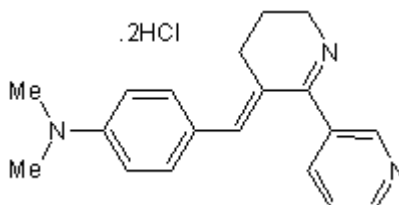
Batch Molecular Weight: 377.83

Physical Appearance: Orange solid

Solubility: water to 100 mM
DMSO to 25 mM

Storage: Desiccate at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.57 (Chloroform:Methanol:Ammonia soln. [9.1.5])

HPLC: Shows >99.3% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	60.4	6.54	11.12
Found	60.16	6.18	11.06

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Description:

Partial agonist at $\alpha 7$ -containing neuronal nicotinic receptors and antagonist at $\alpha 4\beta 2$ and other nicotinic receptors. Displays specific cognition-enhancing effects; improves long-term memory in rats.

Physical and Chemical Properties:

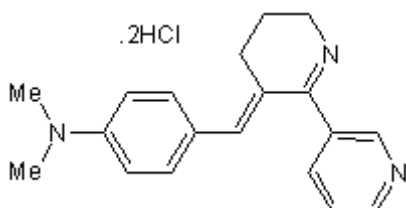
Batch Molecular Formula: C₁₉H₂₁N₃·2HCl· $\frac{3}{4}$ H₂O

Batch Molecular Weight: 377.83

Physical Appearance: Orange solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at -20°C

Solubility & Usage Info:

water to 100 mM

DMSO to 25 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Arendash et al (1995) Improved learning and memory in aged rats with chronic administration of the nicotinic receptor agonist GTS-21. *Brain Res.* **674** 252. PMID: 7796104.

Kem et al (1997) Anabaseine is a potent agonist on muscle and neuronal alpha-bungarotoxin-sensitive nicotinic receptors. *J.Pharmacol.Exp.Ther.* **283** 979. PMID: 9399967.

Stevens et al (1998) Selective alpha7-nicotinic agonists normalize inhibition of auditory response in DBA mice. *Psychopharmacology* **136** 320. PMID: 9600576.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956