

Certificate of Analysis

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Product Name: Spermidine trihydrochloride

Catalog No.: 0959

Batch No.: 4

CAS Number: 334-50-9

EC Number: 206-379-0

IUPAC Name: *N*-(3-Aminopropyl)-1,4-butanediamine trihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇H₁₉N₃.3HCl

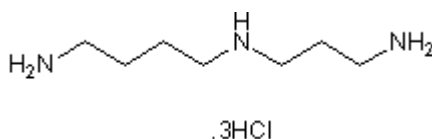
Batch Molecular Weight: 254.63

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.45 (Dichloromethane:Methanol:Ammonia soln. [9:1:0.1])

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	33.02	8.71	16.5
Found	33.04	9.03	16.3

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Binds to the polyamine modulatory site of the NMDA receptor and has been described as an agonist based on its ability to enhance the binding of [³H]-MK801. Activates autophagy.

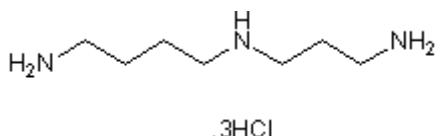
Physical and Chemical Properties:

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Storage: Desiccate at +4°C

Solubility & Usage Info:

water to 100 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:

Galluzzi *et al* (2017) Pharmacological modulation of autophagy: therapeutic potential and persisting obstacles. *Nat.Rev.Drug.Discov.* PMID: 28529316 .

Kishi *et al* (1998) Spermidine, a polyamine site agonist, attenuates working memory deficits caused by blockade of hippocampal muscarinic receptors and mGluRs in rats. *Brain Res.* **793** 311. PMID: 9630697.

Munir *et al* (1993) Polyamines modulate the neurotoxic effects of NMDA *in vivo*. *Brain Res.* **616** 163. PMID: 8358608.

Williams *et al* (1989) Effects of polyamines on the binding of [³H]-MK801 to the N-methyl-D-aspartate receptor: pharmacological evidence for the existence of a polyamine recognition site. *Mol.Pharmacol.* **36** 375. PMID: 2554112.

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