Product Information

**N1-Acetyl spermidine (hydrochloride)**

**Item No. 9001535**

**CAS Registry No.:** 34450-16-3  
**Formal Name:** N-[3-[(4-aminobutyl)amino]propyl]-acetamide, dihydrochloride  
**Synonym:** N1-AcSPD  
**MF:** C9H21N3O • 2HCl  
**FW:** 260.2  
**Purity:** 98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid

**Laboratory Procedures**

For long term storage, we suggest that N1-acetyl spermidine (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

N1-Acetyl spermidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the N1-acetyl spermidine (hydrochloride) in the solvent of choice. N1-Acetyl spermidine (hydrochloride) is soluble in DMSO at a concentration of approximately 0.1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of N1-acetyl spermidine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N1-acetyl spermidine (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

N1-Acetyl spermidine is an acetyl derivative of spermidine (Item No. 14918) that acts as a substrate for polyamine oxidase (PAO).1 In peroxisomes, PAO oxidizes N1-acetyl spermidine to 3-acetamidopropanal and putrescine, a positively charged polyamine that binds DNA and is involved in various cellular processes including cell division, differentiation, and membrane function.2-5 N1-Acetyl spermidine has been used to examine the interaction between DNA and polyamines during the cleavage of phosphodiester bonds at apurinic/apyrimidinic sites in DNA.6

**References**


**Related Products**

For a list of related products please visit: [www.caymanchem.com/catalog/9001535](http://www.caymanchem.com/catalog/9001535)

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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.

**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 Safety Data Sheet, which has been sent to your institution.

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