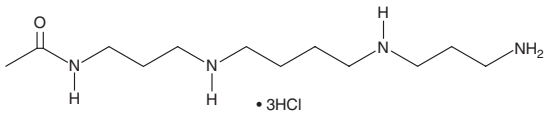
PRODUCT INFORMATION

N^1-Acetylspermine (hydrochloride)

Item No. 17919

CAS Registry No.: 77928-70-2
Formal Name: N-[3-[[4-[(3-aminopropyl)amino] butyl]amino]propyl]-acetamide, trihydrochloride
MF: $C_{12}H_{28}N_4O \bullet 3HCl$
FW: 353.8
Purity: ≥95%
Storage: -20°C
Stability: ≥4 years
Supplied as: A crystalline solid



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

Laboratory Procedures

N^1-Acetylspermine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the N^1-acetylspermine (hydrochloride) in the solvent of choice. N^1-Acetylspermine (hydrochloride) is soluble in water at a concentration of approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

N^1-Acetylspermine is a monoacetylated derivative of spermine (Item No. 18041), an endogenous polyamine synthesized from spermidine (Item No. 14918), that displays lower K_m and higher V_{max} values than spermine, making it a better substrate of polyamine oxidase than the non-acetylated polyamine.[1] Spermine is required for eukaryotic cell growth and protein synthesis and is involved in the modulation of calcium-dependent immune processes.[2,3] N^1-Acetylspermine has been used to study the uptake of the anticancer polyamine analog bleomycin-A5 by the human carnitine transporter SLC22A16.[4]

References

1. Bolkenius, F.N. and Seiler, N. Acetylderivatives as intermediates in polyamine catabolism. *Int. J. Biochem.* **13(3)**, 287-292 (1981).
2. Wallace, H.M., Fraser, A.V., and Hughes, A. A perspective of polyamine metabolism. *Biochem. J.* **376(Pt 1)**, 1-14 (2003).
3. Igarashi, K. and Kashiwagi, K. Polyamines: Mysterious modulators of cellular functions. *Biochem. Biophys. Res. Commun.* **271(3)**, 559-564 (2000).
4. Aouida, M., Poulin, R., and Ramotar, D. The human carnitine transporter SLC22A16 mediates high affinity uptake of the anticancer polyamine analogue bleomycin-A5. *J. Biol. Chem.* **285(9)**, 6275-6284 (2010).

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