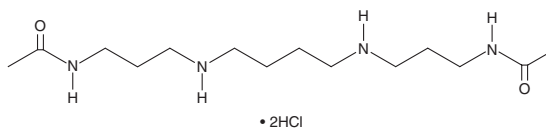


PRODUCT INFORMATION

N¹,N¹²-Diacetylspermine (hydrochloride)

Item No. 17918

CAS Registry No.: 77928-71-3
Formal Name: N,N'-[1,4-butanediylbis(imino-3,1-propanediyl)]bis-acetamide, dihydrochloride
Synonym: BAS
MF: C₁₄H₃₀N₄O₂ • 2HCl
FW: 359.3
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

N¹,N¹²-Diacetylspermine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the N¹,N¹²-diacetylspermine (hydrochloride) in the solvent of choice. N¹,N¹²-Diacetylspermine (hydrochloride) is soluble in organic solvents such as DMSO, which should be purged with an inert gas. The solubility of N¹,N¹²-diacetylspermine (hydrochloride) in this solvent is approximately 0.2 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,N¹²-diacetylspermine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N¹,N¹²-diacetylspermine (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

N¹,N¹²-Acetylspermine is a diacetylated 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} Upregulation of N¹,N¹²-acetylspermine has been linked to the incidence of cancer, making this natural polyamine a potential biomarker for cancer detection.⁴

References

1. Bolkenius, F.N. and Seiler, N. Acetyl derivatives 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. Lin, F.-T., Lai, Y.-J., Makarova, N., et al. The lysophosphatidic acid 2 receptor mediates down-regulation of Siva-1 to promote cell survival. *J. Biol. Chem.* **282**(52), 37759-37769 (2007).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM