

PRODUCT INFORMATION



dAPM-1 (acetate salt)

Item No. 41943

Formal Name: (S)-2-amino-N-(4-(((S)-2-Mamino-5-(3-((2,2,4,6,7-pentamethyl-2,3-dihydrobenzofuran-5-yl)sulfonyl)guanidino)pentanamido)methyl)benzyl)-5-(3-((2,2,4,6,7-pentamethyl-2,3-dihydrobenzofuran-5-yl)sulfonyl)guanidino)pentanamide, monoacetic acid

Synonym: Diarginine Peptidomimetic-1

MF: $C_{46}H_{68}N_{10}O_8S_2 \cdot C_2H_4O_2$

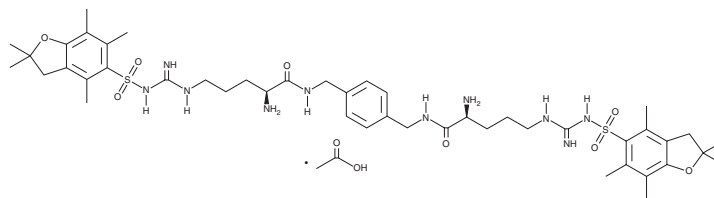
FW: 1,013.3

Purity: $\geq 98\%$

Supplied as: A solid

Storage: -20°C

Stability: ≥ 4 years



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

Laboratory Procedures

dAPM-1 (acetate salt) is supplied as a solid. A stock solution may be made by dissolving the dAPM-1 (acetate salt) in the solvent of choice, which should be purged with an inert gas. dAPM-1 (acetate salt) is slightly soluble (0.1-1 mg/ml) in acetonitrile

dAPM-1 (acetate salt) is slightly soluble (0.1-1 mg/ml) in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

dAPM-1 is a peptidomimetic antibiotic agent.¹ dAPM-1 forms self-aggregates in the presence of dsDNA with a critical aggregation concentration (CAC) of 8 $\mu\text{g/ml}$. It selectively induces intracellular aggregation in *B. subtilis* over HEK293T cells at 128 $\mu\text{g/ml}$. It is active against *S. aureus*, methicillin-resistant *S. aureus* (MRSA), *B. subtilis*, *E. faecium*, and *M. smegmatis* (MICs = 8, 4, 4, 8, and 16 $\mu\text{g/ml}$, respectively) and is not cytotoxic to NIH3T3 or HK-2 cells ($\text{IC}_{50}\text{s} = >256 \mu\text{g/ml}$ for both). Extended exposure of *S. aureus* or *E. coli* to dAPM-1 for greater than 40 and 30 days, respectively, does not induce resistance to dAPM-1. *In vivo*, dAPM-1 (10 mg/kg) increases survival in a mouse model of sepsis induced by *S. aureus*.

Reference

1. Yang, A., Song, J., Li, J., *et al.* Ligand-receptor interaction-induced intracellular phase separation: A global disruption strategy for resistance-free lethality of pathogenic bacteria. *J. Am. Chem. Soc.* **146**(33), 23121-23137 (2024).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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