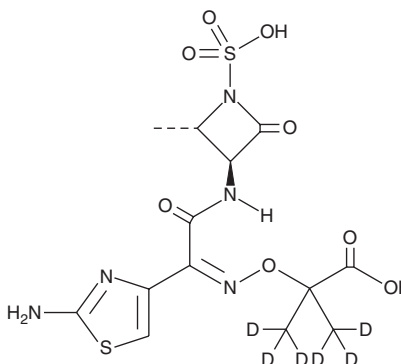


# PRODUCT INFORMATION



## Aztreonam-d<sub>6</sub> Item No. 28799

**CAS Registry No.:** 1127452-94-1  
**Formal Name:** 2-[[[Z]-[1-(2-amino-4-thiazolyl)-2-[[[(2S,3S)-2-methyl-4-oxo-1-sulfo-3-azetidiny]amino]-2-oxoethylidene]amino]oxy]-2-(methyl-d<sub>3</sub>)-propanoic-3,3,3-d<sub>3</sub> acid  
**Synonym:** SQ 26,776-d<sub>6</sub>  
**MF:** C<sub>13</sub>H<sub>11</sub>D<sub>6</sub>N<sub>5</sub>O<sub>8</sub>S<sub>2</sub>  
**FW:** 441.5  
**Chemical Purity:** ≥95% (Aztreonam)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>6</sub>); ≤1% d<sub>0</sub>  
**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

Aztreonam-d<sub>6</sub> is intended for use as an internal standard for the quantification of aztreonam (Item No. 19784) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Aztreonam-d<sub>6</sub> is supplied as a solid. A stock solution may be made by dissolving the aztreonam-d<sub>6</sub> in the solvent of choice, which should be purged with an inert gas. Aztreonam-d<sub>6</sub> is slightly soluble in methanol and DMSO.

### Description

Aztreonam is a synthetic  $\beta$ -lactam antibiotic of the monobactam class.<sup>1</sup> It is active against clinical isolates of *E. coli*, *S. marcescens*, *P. aeruginosa*, *Klebsiella* species, *Proteus* species, and *Enterobacter* species (MICs = <0.1, 1.2, 5.2, 3.1, <0.1, and 19.3  $\mu$ g/ml, respectively) but is inactive against *S. pneumoniae*, *B. fragilis*, and *S. faecalis* (MICs = >100  $\mu$ g/ml for all). It interferes with peptidoglycan synthesis in the bacterial cell wall of the Gram-negative bacteria *E. coli*, *P. vulgaris*, *E. cloacae*, *K. pneumoniae*, and *P. aeruginosa* by inhibiting penicillin-binding protein 3 (PBP3; IC<sub>100</sub> = 0.1  $\mu$ g/ml for all). It increases survival in mice with systemic Gram-negative bacterial infections (ED<sub>50</sub>s = 0.1-24.7 mg/kg). Formulations containing aztreonam have been used in the treatment of *P. aeruginosa* infections in individuals with cystic fibrosis.

### Reference

1. Sykes, R.B., Bonner, D.P., Bush, K., *et al.* Aztreonam (SQ 26,776), a synthetic monobactam specifically active against aerobic gram-negative bacteria. *Antimicrob. Agents Chemother.* **21(1)**, 85-92 (1982).

**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**  
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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