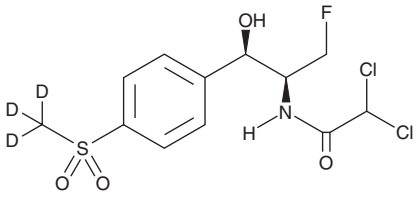
# PRODUCT INFORMATION

## Florfenicol-$d_3$

*Item No. 28538*

| | |
|---|---|
| **CAS Registry No.:** | 2213400-85-0 |
| **Formal Name:** | 2,2-dichloro-N-[(1S,2R)-1-(fluoromethyl)-2-hydroxy-2-[4-(methyl-$d_3$-sulfonyl)phenyl]ethyl]-acetamide |
| **MF:** | $C_{12}H_{11}Cl_2D_3FNO_4S$ |
| **FW:** | 361.2 |
| **Chemical Purity:** | ≥95% (Florfenicol) |
| **Deuterium Incorporation:** | ≥99% deuterated forms ($d_1$-$d_3$); ≤1% $d_0$ |
| **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

Florfenicol-$d_3$ is intended for use as an internal standard for the quantification of florfenicol (Item No. 19458) 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).

Florfenicol-$d_3$ is supplied as a solid. A stock solution may be made by dissolving the florfenicol-$d_3$ in the solvent of choice, which should be purged with an inert gas. Florfenicol-$d_3$ is slightly soluble in methanol, DMSO, and dimethyl formamide.

### Description

Florfenicol is a broad-spectrum fluorinated antibiotic and a derivative of thiamphenicol (Item No. 21357).[1] It is active against human clinical isolates of enteric bacteria, including *E. coli*, *Klebsiella*, *Enterobacter*, *Citrobacter*, *P. mirabilis*, and *Salmonella* ($MIC_{50}$s = 6.3-12.5 µg/ml).[2] Florfenicol is also active against clinical isolates of various bovine and porcine respiratory tract pathogens, including *P. multocida*, *A. pleuropneumoniae*, and *B. bronchiseptica* ($MIC_{50}$s = 0.25-4 µg/ml).[3] It inhibits peptidyl transferase activity in 70S ribosomes isolated from *E. coli* when used at a concentration of 1 mM.[1] Formulations containing florfenicol have been used in the treatment of infectious respiratory disease in cattle.

### References


1. Cannon, M., Harford, S., and Davies, J. A comparative study on the inhibitory actions of chloramphenicol, thiamphenicol and some fluorinated derivatives. *J. Antimicrob. Chemother.* **26(3)**, 307-317 (1990).
2. Neu, H.C. and Fu, K.P. In vitro activity of chloramphenicol and thiamphenicol analogs. *Antimicrob. Agents Chemother.* **18(2)**, 311-316 (1980).
3. Priebe, S. and Schwarz, S. In vitro activities of florfenicol against bovine and porcine respiratory tract pathogens. *Antimicrob. Agents Chemother.* **47(8)**, 2703-2705 (2003).





**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