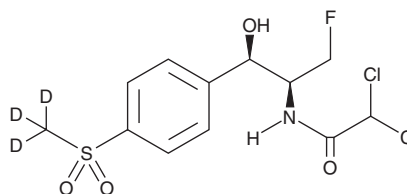


# PRODUCT INFORMATION



## Florfenicol-d<sub>3</sub> 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<sub>3</sub>-sulfonyl)phenyl]ethyl]-acetamide  
**MF:** C<sub>12</sub>H<sub>11</sub>Cl<sub>2</sub>D<sub>3</sub>FNO<sub>4</sub>S  
**FW:** 361.2  
**Chemical Purity:** ≥95% (Florfenicol)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</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

Florfenicol-d<sub>3</sub> 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<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the florfenicol-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Florfenicol-d<sub>3</sub> 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).<sup>1</sup> It is active against human clinical isolates of enteric bacteria, including *E. coli*, *Klebsiella*, *Enterobacter*, *Citrobacter*, *P. mirabilis*, and *Salmonella* (MIC<sub>50S</sub> = 6.3-12.5 µg/ml).<sup>2</sup> Florfenicol is also active against clinical isolates of various bovine and porcine respiratory tract pathogens, including *P. multocida*, *A. pleuropneumoniae*, and *B. bronchiseptica* (MIC<sub>50S</sub> = 0.25-4 µg/ml).<sup>3</sup> It inhibits peptidyl transferase activity in 70S ribosomes isolated from *E. coli* when used at a concentration of 1 mM.<sup>1</sup> 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).

#### 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