PRODUCT INFORMATION

Cholic Acid-d_4 3-sulfate (potassium salt)

Item No. 43709

Formal Name: (R)-4-((3R,5R,7R,8R,9S,10S,12S,13R,14S,17R)-7,12-dihydroxy-10,13-dimethyl-3-(sulfonatooxy) hexadecahydro-1H-cyclopenta[a]phenanthren-17-yl-2,2,4,4-d_4)pentanoate, dipotassium salt

Synonyms: 3-Sulfocholate-d_4, 3-Sulfocholic Acid-d_4

MF: $C_{24}H_{34}D_4O_8S \bullet 2K$

FW: 568.8

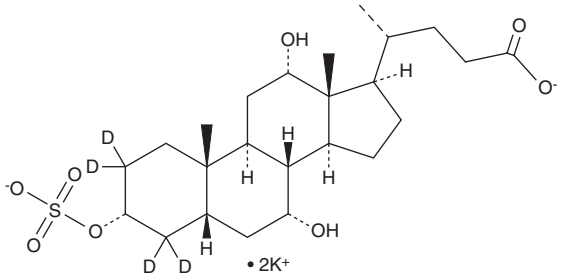
Chemical Purity: ≥95% (Cholic acid 3-sulfate)

Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤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

Cholic acid-d_4 3-sulfate (potassium salt) is intended for use as an internal standard for the quantification of cholic acid 3-sulfate (Item No. 38019) 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).

Cholic acid-d_4 3-sulfate (potassium salt) is supplied as a solid. A stock solution may be made by dissolving the cholic acid-d_4 3-sulfate (potassium salt) in the solvent of choice, which should be purged with an inert gas. Cholic acid-d_4 3-sulfate (potassium salt) is sparingly soluble (1-10 mg/ml).

Description

Cholic acid 3-sulfate is a metabolite of the primary bile acid cholic acid (Item No. 20250).[1,2] Plasma levels of cholic acid 3-sulfate are increased in patients with intrahepatic cholestasis and mutations in the gene encoding the bile salt export pump (BSEP), *ABCB11*.[3]

References

1. Alnouti, Y. Bile acid sulfation: A pathway of bile acid elimination and detoxification. *Toxicol. Sci.* **108(2)**, 225-246 (2009).
2. Goto, J., Kato, H., Saruta, Y., *et al*. Studies on steroids. CLXX. Separation and determination of bile acid 3-sulfates in human bile by high-performance liquid chromatography. *J. Chromatogr.* **226(1)**, 13-24 (1981).
3. Liu, T., Wang, R.-X., Han, J., *et al*. Comprehensive bile acid profiling in hereditary intrahepatic cholestasis: Genetic and clinical correlations. *Liver Int.* **38(9)**, 1676-1685 (2018).

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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