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Produktinformation



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Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Trockeneiszuschlag
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- Expressversand

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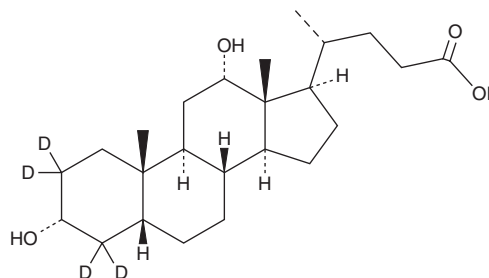
PRODUCT INFORMATION



Deoxycholic Acid-d₄

Item No. 20851

CAS Registry No.: 112076-61-6
Formal Name: (3 α ,5 β ,12 α)-3,12-dihydroxy-cholan-24-oic-2,2,4,4-d₄ acid
Synonyms: Cholanoic acid-d₄, DCA-d₄
MF: C₂₄H₃₆D₄O₄
FW: 396.6
Chemical Purity: \geq 95% (Deoxycholic acid)
Deuterium Incorporation: \geq 99% deuterated forms (d₁-d₄); \leq 1% d₀
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 2 years



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

Laboratory Procedures

Deoxycholic acid-d₄ (DCA-d₄) is intended for use as an internal standard for the quantification of DCA (Item Nos. 20756 | 18231) 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).

DCA-d₄ is supplied as a crystalline solid. A stock solution may be made by dissolving the DCA-d₄ in the solvent of choice. DCA-d₄ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of DCA-d₄ in ethanol and DMSO is approximately 20 mg/ml and approximately 30 mg/ml in DMF.

Description

DCA is a secondary bile acid that is formed via microbial transformation of cholic acid (Item No. 20250) in the colon.¹ It can be conjugated to glycine or taurine (Item No. 27031) to produce glycodeoxycholic acid (GDCA; Item No. 20274) or taurodeoxycholic acid (TDCA; Item No. 15935), respectively, in hepatocytes.¹⁻³ DCA (0.2% v/v) inhibits spore germination induced by taurocholic acid (TCA; Item No. 16215) in seven *C. difficile* strains, as well as inhibits growth and decreases the cytotoxicity of *C. difficile* culture supernatants to Vero cells when used at a concentration of 0.02% v/v.¹ It inhibits ionizing radiation-induced p53-dependent transcription in a reporter assay using HCT116 cells when used at a concentration of 200 μ M.⁴ Fecal and intestinal tissue levels of DCA are increased in a rat model of high-fat diet-induced obesity compared with rats fed a normal diet.⁵ Increased serum DCA levels have been found in patients with colorectal cancer.⁶

References

1. Thanissery, R., Winston, J.A., and Theriot, C.M. *Anaerobe* **45**, 86-100 (2017).
2. Schmid, A., Neumann, H., Karrasch, T., et al. *PLoS One* **11(2)**, e0148869 (2016).
3. Šarenac, T.M. and Mikov, M. *Front. Pharmacol.* **9**, 939 (2018).
4. Qiao, D., Gaitonde, S.V., Qi, W., et al. *Carcinogenesis* **22(6)**, 957-964 (2001).
5. Lin, H., An, Y., Tang, H., et al. *J. Agric. Food Chem.* **67(13)**, 3624-3632 (2019).
6. Bayerdörffer, E., Mannes, G.A., Richter, W.O., et al. *Gastroenterology* **104(1)**, 145-151 (1993).

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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