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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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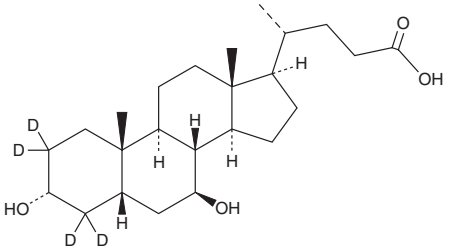
PRODUCT INFORMATION

Ursodeoxycholic Acid-d_4 MaxSpec® Standard

Item No. 31368



CAS Registry No.: 347841-46-7
Formal Name: (3α,5β,7β)-3,7-dihydroxy-cholan-24-oic-2,2,4,4-d_4 acid
Synonym: UDCA-d_4
MF: $C_{24}H_{36}D_4O_4$
FW: 396.6
Purity: ≥95%
Supplied as: A solution in methanol; in a deactivated glass ampule
Concentration: 100 µg/ml (nominal); see certificate of analysis for verified concentration
Storage: -20°C
Stability: ≥2 years; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*
Special Conditions: Store upright and unopened at -20°C. Warm to room temperature prior to opening. Light sensitive.

Description

Ursodeoxycholic acid-d_4 (UDCA-d_4) is intended for use as an internal standard for the quantification of UDCA (Item No. 15121) by GC- or LC-MS. UDCA is a secondary bile acid formed *via* epimerization of chenodeoxycholic acid (CDCA; Item No. 10011286).[1,2] UDCA is also a metabolite of lithocholic acid (LCA; Item No. 20253) in human liver microsomes.[3] It inhibits taurocholic acid (Item No. 16215) uptake in HeLa cells expressing recombinant sodium/taurocholate cotransporting polypeptide (NTCP) with an IC_{50} value of 3.6 µM.[5] UDCA (50 µM) inhibits apoptosis induced by deoxycholic acid (DCA; Item Nos. 20756 | 18231) or ethanol in primary rat hepatocytes.[4] Dietary administration of UDCA blocks DCA-induced increases in the number of TUNEL-positive hepatocytes in rats. Formulations containing UDCA have been used in the treatment of primary biliary cirrhosis.

Ursodeoxycholic acid-d_4 MaxSpec® standard is a quantitative grade standard of ursodeoxycholic acid-d_4 (Item No. 21892) that has been prepared specifically for mass spectrometry or any application where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. This ursodeoxycholic acid-d_4 MaxSpec® standard is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product. ***Note:*** *The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.*

References

1. Dawson, P.A. and Karpen, S.J. Intestinal transport and metabolism of bile acids. *J. Lipid Res.* **56(6)**, 1085-1099 (2015).
2. Chiang, J.Y.L. Bile acid metabolism and signaling in liver disease and therapy. *Liver Res.* **1(1)**, 3-9 (2017).
3. Deo, A.K. and Bandiera, S.M. 3-Ketocholanoic acid is the major in vitro human hepatic microsomal metabolite of lithocholic acid. *Drug Metab. Dispos.* **37(9)**, 1938-1947 (2009).
4. Rodrigues, C.M.P., Fan, G., Ma, X., *et al.* A novel role for ursodeoxycholic acid in inhibiting apoptosis by modulating mitochondrial membrane perturbation. *J. Clin. Invest.* **101(12)**, 2790-2799 (1998).
5. Kim, R.B., Leake, B., Cvetkovic, M., *et al.* Modulation by drugs of human hepatic sodium-dependent bile acid transporter (sodium taurocholate cotransporting polypeptide) activity. *J. Pharmacol. Exp. Ther.* **291(3)**, 1204-1209 (1999).

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