

PRODUCT INFORMATION



Tauroursodeoxycholic Acid-d₄ MaxSpec[®] Standard

Item No. 31564

CAS Registry No.: 2410279-94-4

Formal Name: 2-[[[(3 α ,5 β ,7 β)-3,7-dihydroxy-24-oxocholan-24-yl]-2,2,3,4,4-d₄]amino]-ethanesulfonic acid

Synonyms: 3 α ,7 β -dihydroxy-5 β -cholanoyl Taurine-d₄, TUDCA-d₄

MF: C₂₆H₄₁D₄NO₆S

FW: 503.7

Purity: $\geq 95\%$

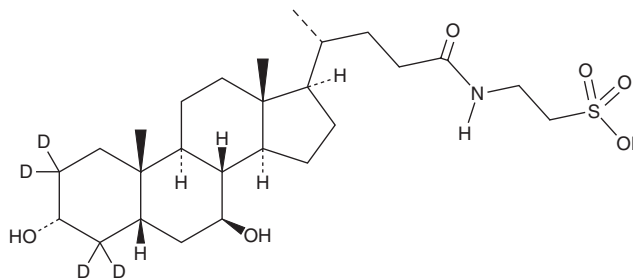
Supplied as: A solution in methanol; in a deactivated glass ampule

Concentration: 100 $\mu\text{g/ml}$ (nominal); see certificate of analysis for verified concentration

Storage: -20°C

Stability: ≥ 5 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

Tauroursodeoxycholic acid-d₄ (TUDCA-d₄) is intended for use as an internal standard for the quantification of tauroursodeoxycholic acid (Item Nos. 20277 | 9003379) by GC- or LC-MS. TUDCA is a taurine-conjugated form of the secondary bile acid ursodeoxycholic acid (Item No. 15121).^{1,2} TUDCA is found in small quantities in human bile but at a higher concentration in the bile of black bears.² It demonstrates anti-apoptotic activity in rodent models of tauopathy, Huntington's disease, ischemic brain injury, and retinal disorders.^{2,3}

TUDCA-d₄ MaxSpec[®] standard is a quantitative grade standard of TUDCA-d₄ (Item No. 32985) 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. The verified concentration is provided on the certificate of analysis. This TUDCA-d₄ 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. Beuers, U. Effects of bile acids on hepatocellular signaling and secretion. *Yale J. Biol. Med.* **70**(4), 341-346 (1997).
2. Boatright, J.H., Nickerson, J.M., Moring, A.G., et al. Bile acids in treatment of ocular disease. *J. Ocul. Biol. Dis. Infor.* **2**(3), 149-159 (2009).
3. Vang, S., Longley, K., Steer, C.J., et al. The unexpected uses of urso- and tauroursodeoxycholic acid in the treatment of non-liver diseases. *Glob. Adv. Health Med.* **3**(3), 58-69 (2014).

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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