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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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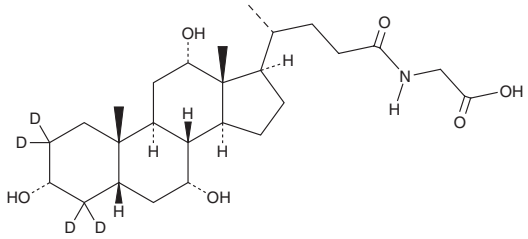
PRODUCT INFORMATION

Glycocholic Acid-d_4 MaxSpec® Standard

Item No. 31352



CAS Registry No.: 1201918-15-1
Formal Name: N-[(3α,5β,7α,12α)-3,7,12-trihydroxy-24-oxocholan-24-yl-2,2,4,4-d_4]-glycine
Synonyms: Cholylglycine-d_4, GCA-d_4
MF: $C_{26}H_{39}D_4NO_6$
FW: 469.7
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

Glycocholic acid-d_4 is intended for use as an internal standard for the quantification of glycocholic acid (Item No. 20276) by GC- or LC-MS. Glycocholic acid is a glycine-conjugated form of the primary bile acid cholic acid (Item No. 20250) and has roles in the emulsification of fats.[1,2] It reduces expression of the gene encoding the farnesoid X receptor (FXR) and increases expression of the genes encoding the bile acid receptors TGR5 and S1PR2 in SNU-245 cells when used at a concentration of 1.6 µmol/ml.[3] Glycocholic acid (250 µM) increases the intracellular accumulation and cytotoxicity of epirubicin (Item No. 12091) in Caco-2 cells, as well as decreases expression of the genes encoding multidrug resistance protein 1 (MDR1), MDR-associated protein 1 (MRP1), and MRP2 when used alone or in combination with epirubicin.[4] It increases absorption of epirubicin into everted sacs of rat ileum and jejunum when used at a concentration of 250 µM. The bile acid composition ratio of glycocholic acid is elevated in bile of patients with cholangiocarcinoma compared with patients with pancreatic cancer or benign biliary diseases.[3] Serum levels of glycocholic acid are elevated in patients with hepatocellular carcinoma compared with healthy individuals.[2]

Glycocholic acid-d_4 MaxSpec® standard is a quantitative grade standard of glycocholic acid-d_4 (Item No. 21889) 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 glycocholic 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. Lefebvre, P., Cariou, B., Lien, F., *et al. Physiol. Rev.* **89(1)**, 147-191 (2009).
2. Guo, C., Xie, C., Ding, P., *et al. J. Chromatogr. B. Analyt. Technol. Biomed. Life Sci.* **1072**, 315-319 (2018).
3. Song, W.-S., Park, H.-M., Ha, J.M., *et al. Sci. Rep.* **8(1)**, 11088 (2018).
4. Lo, Y.L., Ho, C.T., and Tsai, F.L. *Eur. J. Pharm. Sci.* **35(1-2)**, 52-67 (2008).

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