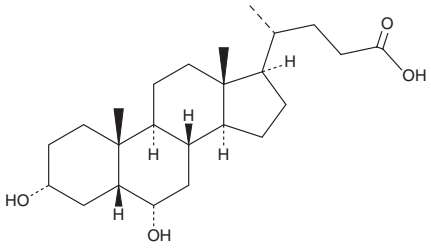
PRODUCT INFORMATION

Hyodeoxycholic Acid MaxSpec® Standard

Item No. 31606



CAS Registry No.: 83-49-8
Formal Name: (3α,5β,6α)-3,6-dihydroxy-cholan-24-oic acid
Synonyms: α-Hyodeoxycholic Acid, HDCA, NSC 60672
MF: $C_{24}H_{40}O_4$
FW: 392.6
Purity: ≥95%
Supplied as: A solution in methanol; in a deactivated glass ampule
Concentration: 1 mg/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

Hyodeoxycholic acid (HDCA) is a secondary bile acid.[1] It is produced from lithocholic acid (Item No. 20253) by gut bacteria.[1-3] Dietary administration of HDCA (1.25% w/w) decreases plasma VLDL and LDL cholesterol levels and reduces fasting glucose levels and atherosclerotic lesion size in LDL receptor knockout mice fed a Western diet.[4] Serum levels of HDCA are increased in patients with Crohn's disease or ulcerative colitis.[5]

Hyodeoxycholic acid MaxSpec® standard is a quantitative grade standard of HDCA (Item No. 20294) 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 hyodeoxycholic acid 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. Einarsson, K. On the formation of hyodeoxycholic acid in the rat. Bile acids and steroids 154. *J. Biol. Chem.* **241(3)**, 534-539 (1966).
2. Madsen, D., Beaver, M., Chang, L., *et al.* Analysis of bile acids in conventional and germfree rats. *J. Lipid. Res.* **17(2)**, 107-111 (1976).
3. Sacquet, E., Parquet, M., Riottot, M., *et al.* Intestinal absorption, excretion, and biotransformation of hyodeoxycholic acid in man. *J. Lipid. Res.* **24(5)**, 604-613 (1983).
4. Shih, D.M., Shaposhnik, Z., Meng, Y., *et al.* Hyodeoxycholic acid improves HDL function and inhibits atherosclerotic lesion formation in LDLR-knockout mice. *FASEB J.* **27(9)**, 3805-3817 (2013).
5. Gnewuch, C., Liebisch, G., Langmann, T., *et al.* Serum bile acid profiling reflects enterohepatic detoxification state and intestinal barrier function in inflammatory bowel disease. *World J. Gastroenterol.* **15(25)**, 3134-3141 (2009).

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