

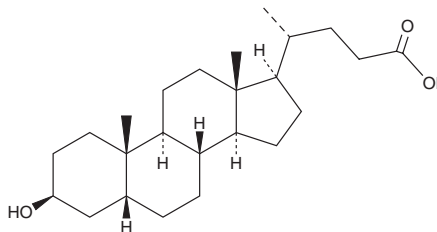
PRODUCT INFORMATION



Isolithocholic Acid

Item No. 29545

CAS Registry No.: 1534-35-6
Formal Name: (3 β ,5 β)-3-hydroxy-cholan-24-oic acid
Synonyms: Isolithocholate, iso-LCA
MF: C₂₄H₄₀O₃
FW: 376.6
Purity: $\geq 95\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 2 years



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

Laboratory Procedures

Isolithocholic acid is supplied as a solid. A stock solution may be made by dissolving the isolithocholic acid in the solvent of choice, which should be purged with an inert gas. Isolithocholic acid is slightly soluble in ethanol, chloroform, and methanol.

Description

Isolithocholic acid is a bile acid that is formed via microbial metabolism of lithocholic acid (LCA; Item No. 20253) or lithocholic acid 3 α -sulfate (Item No. 20676).^{1,2} Isolithocholic acid (0.01%) inhibits spore germination induced by taurocholic acid (TCA; Item No. 16215) in the *C. difficile* strains CD196, M68, BI9, and 630, as well as inhibits growth and decreases the cytotoxicity of *C. difficile* culture supernatants to Vero cells when used at a concentration of 0.0003%.³ Fecal levels of isolithocholic acid are decreased in a rat model of high-fat diet-induced obesity compared with rats fed a normal diet.⁴

References

1. Batta, A.K., Salen, G., and Shefer, S. Transformation of bile acids into iso-bile acids by *Clostridium perfringens*: Possible transport of 3 β -hydrogen via the coenzyme. *Hepatology* **5**(6), 1126-1131 (1985).
2. Borriello, S.P. and Owen, R.W. The metabolism of lithocholic acid and lithocholic acid-3- α -sulfate by human fecal bacteria. *Lipids* **17**(7), 477-482 (1982).
3. Thanissery, R., Winston, J.A., and Theriot, C.M. Inhibition of spore germination, growth, and toxin activity of clinically relevant *C. difficile* strains by gut microbiota derived secondary bile acids. *Anaerobe* **45**, 86-100 (2017).
4. Lin, H., An, Y., Tang, H., et al. Alterations of bile acids and gut microbiota in obesity induced by high fat diet in rat model. *J. Agric. Food Chem.* **67**(13), 3624-3632 (2019).

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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