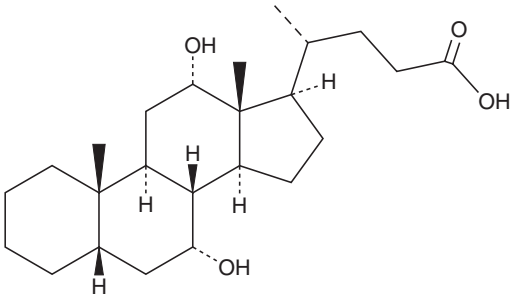
PRODUCT INFORMATION

Isodeoxycholic Acid

Item No. 29890

CAS Registry No.:	566-17-6
Formal Name:	(5β,7α,12α)-7,12-dihydroxy-cholan-24-oic acid
Synonyms:	3-deoxyCA, 3-deoxy Cholic Acid, 3-DCA, iDCA, isoDCA, 7α,12α-Dihydroxycholanic Acid, 7α,12α-Dihydroxycholic Acid
MF:	$C_{24}H_{40}O_4$
FW:	392.6
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Isodeoxycholic acid is supplied as a solid. A stock solution may be made by dissolving the isodeoxycholic acid in the solvent of choice, which should be purged with an inert gas. Isodeoxycholic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of isodeoxycholic acid in ethanol and DMSO is approximately 20 mg/ml and approximately 30 mg/ml in DMF.

Isodeoxycholic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, isodeoxycholic acid should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Isodeoxycholic acid has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Isodeoxycholic acid is a bile acid and an agonist of the farnesoid X receptor (FXR).[1] It induces FXR-mediated gene expression in a reporter assay using COS-7 cells when used at a concentration of 30 µM. Isodeoxycholic acid also activates large-conductance calcium-activated potassium channels (K_{Ca}1.1/BK) in isolated rabbit superior mesenteric arteries.[2]

References

1. T., S., Tamehiro, N., Sato, Y., *et al*. The novel compounds that activate farnesoid X receptor: The diversity of their effects on gene expression. *J. Pharmacol. Sci.* **107(3)**, 285-294 (2008).
2. Dopico, A.M., Walsh, J.V., and Singer, J.J. Natural bile acids and synthetic analogues modulate large conductance Ca^{2+}-activated K^+ (BK_{Ca}) channel activity in smooth muscle cells. *J. Gen. Physiol.* **119(3)**, 251-273 (2002).uiy

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