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Diagnostik & molekulare Diagnostik



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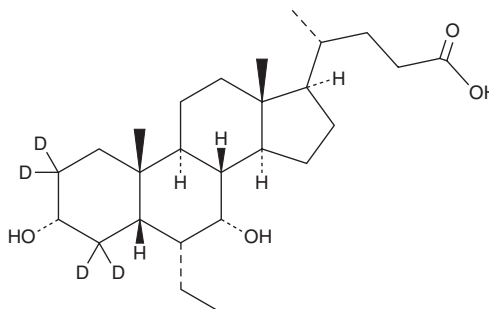
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PRODUCT INFORMATION

6-ECDCA-d₄ Item No. 39007

CAS Registry No.: 2025364-15-0
Formal Name: (3α,5β,6α,7α)-6-ethyl-3,7-dihydroxy-
 cholan-24-oic-2,2,4,4-d₄ acid
Synonyms: 6α-ethyl Chenodeoxycholic Acid-d₄,
 Obeticholic Acid-d₄
MF: C₂₆H₄₀D₄O₄
FW: 424.7
Chemical Purity: ≥95% (6-ECDCA)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
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

6-ECDCA-d₄ is intended for use as an internal standard for the quantification of 6-ECDCA (Item No. 11031) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

6-ECDCA-d₄ is supplied as a solid. A stock solution may be made by dissolving the 6-ECDCA-d₄ in the solvent of choice, which should be purged with an inert gas. 6-ECDCA-d₄ is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Description

6-ECDCA is a synthetic bile acid that acts as a potent and selective agonist of the farnesoid X receptor (FXR; EC₅₀ = 99 nM).¹ Through FXR, it alters gene expression that results in protection against cholestasis, as well as liver fibrosis, in animal models.¹⁻³ 6-ECDCA also, through FXR, promotes the differentiation of adipocytes and enhances insulin signaling in mature adipocytes.⁴ In ApoE^{-/-} mice, 6-ECDCA ameliorates vascular calcification secondary to chronic kidney disease without affecting the development of atherosclerosis.⁵

References

1. Pellicciari, R., Fiorucci, S., Camaioni, E., *et al.* 6α-ethyl-chenodeoxycholic acid (6-ECDCA), a potent and selective FXR agonist endowed with anticholestatic activity. *J. Med. Chem.* **45**(17), 3569-3572 (2002).
2. Fiorucci, S., Clerici, C., Antonelli, E., *et al.* Protective effects of 6-ethyl chenodeoxycholic acid, a farnesoid X receptor ligand, in estrogen-induced cholestasis. *J. Pharmacol. Exp. Ther.* **313**(2), 604-612 (2005).
3. Fiorucci, S., Rizzo, G., Antonelli, E., *et al.* A farnesoid X receptor-small heterodimer partner regulatory cascade modulates tissue metalloproteinase inhibitor-1 and matrix metalloprotease expression in hepatic stellate cells and promotes resolution of liver fibrosis. *J. Pharmacol. Exp. Ther.* **314**(2), 584-595 (2005).
4. Rizzo, G., Disante, M., Mencarelli, A., *et al.* The farnesoid X receptor promotes adipocyte differentiation and regulates adipose cell function in vivo. *Mol. Pharmacol.* **70**(4), 1164-1173 (2006).
5. Miyazaki-Anzai, S., Levi, M., Kratzer, A., *et al.* Farnesoid X receptor activation prevents the development of vascular calcification in ApoE^{-/-} mice with chronic kidney disease. *Circ. Res.* **106**(12), 1807-1817 (2010).

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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