Metabolite resulting from the action of cholesterol 7 alpha-hydroxylase on cholesterol. 7α-Hydroxycholesterol is the first intermediate and a rate-limiting step in the major pathway for bile acid synthesis in humans. A pro-inflammatory mediator which upregulates production of CCL2 and MMP9 in macrophages and may promote progression of atherosclerosis. Possible biomarker for cellular lipid peroxidation.

2) Kim et al. (2015) 7α-Hydroxycholesterol induces inflammation by enhancing production of chemokine (C-C motif) ligand 2; Biochem. Biophys. Res. Commun., 467 879
3) Kim et al. (2014) 27-Hydroxycholesterol and 7alpha-hydroxycholesterol trigger a sequence of events leading to migration of CCR5-expressing Th1 lymphocytes; Toxicol. Appl. Pharmacol., 274 462

**PHYSICAL DATA**

- Molecular Weight: 402.66
- Molecular Formula: C_{27}H_{46}O_{2}
- Purity: 98% by TLC [3:2 ethyl acetate : hexane; Rf = 0.15]
- NMR: (Conforms)
- Solubility: DMSO or Ethanol
- Physical Description: White or pale yellow solid
- Storage and Stability: Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

*Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.*

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