

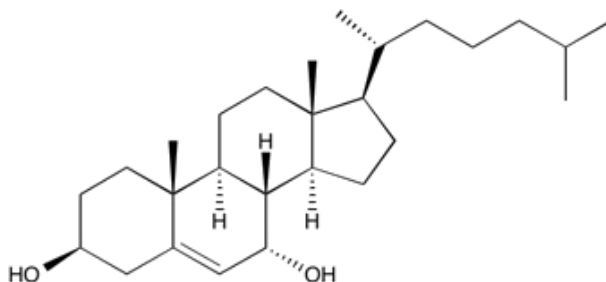
**Catalog # 10-4538**

**7 $\alpha$ -Hydroxycholesterol**

CAS# 566-26-7

5-Cholesten-3 $\beta$ , 7 $\alpha$ -diol

Lot # FBA6104



Metabolite resulting from the action of cholesterol 7  $\alpha$ -hydroxylase on cholesterol. 7 $\alpha$ -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.<sup>2,3</sup> Possible biomarker for cellular lipid peroxidation.<sup>4</sup>

- 1) Duane and Javitt (2002), *Conversion of 7  $\alpha$ -hydroxycholesterol to bile acid in human subjects: is there an alternate pathway favoring cholic acid synthesis?*; J. Lab. Clin. Med., **139** 109
- 2) Kim *et al.* (2015) *7 $\alpha$ -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 7 $\alpha$ -hydroxycholesterol trigger a sequence of events leading to migration of CCR5-expressing Th1 lymphocytes*; Toxicol. Appl. Pharmacol., **274** 462
- 4) Saito and Noguchi (2014) *7-Hydroxycholesterol as a possible biomarker of cellular lipid peroxidation: difference between cellular and plasma lipid peroxidation*; Biochem. Biophys. Res. Commun., **446** 741

**PHYSICAL DATA**

Molecular Weight:	402.66
Molecular Formula:	C <sub>27</sub> H <sub>46</sub> O <sub>2</sub>
Purity:	98% by TLC [3:2 ethyl acetate : hexane; R <sub>f</sub> = 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.**