7-keto Cholesterol
Item No. 16339

CAS Registry No.: 566-28-9
Formal Name: 3β-hydroxy-cholesterol-5-en-7-one
Synonyms: Δ5-Cholesterol-3β-ol-7-one, 7-oxo Cholesterol, SC-4722
MF: C27H44O2
FW: 400.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/VIs: λmax: 238 nm

Laboratory Procedures
For long term storage, we suggest that 7-keto cholesterol be stored as supplied at -20°C. It should be stable for at least two years.

7-keto Cholesterol is supplied as a crystalline solid. A stock solution may be made by dissolving the 7-keto cholesterol in the solvent of choice. 7-keto Cholesterol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 7-keto cholesterol in these solvents is approximately 20, 0.1, and 2 mg/ml, respectively.

7-keto Cholesterol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 7-keto cholesterol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 7-keto Cholesterol has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

7-keto Cholesterol is a bioactive sterol that can affect cholesterol homeostasis, membrane properties and cell survival.1,2 It strongly inhibits cytochrome P450 7A1 (CYP7A1), the cholesterol 7α-hydroxylase, with an IC50 of ~1 μM.2 7-keto Cholesterol can be produced by oxidation of cholesterol associated with ethanol-mediated lipid peroxidation or photodamage.3,5 It can also be derived enzymatically by oxidation of 7-dehydrocholesterol, the immediate precursor of cholesterol, by CYP7A1, while 11β-hydroxysteroid dehydrogenase type 1 stimulates its reduction.2,6 7-keto Cholesterol is a major oxysterol component of oxidized LDL.1,7 This compound can be used as a standard in the determination of cholesterol derivatives by GC-MS or HPLC.

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/16339

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS, NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SafETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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