PRODUCT INFORMATION

25(S)-27-hydroxy Cholesterol
Item No. 14791

CAS Registry No.: 56845-83-1
Formal Name: (25S)-cholest-5-ene-3β,26-diol
Synonym: (25S)-26-hydroxy cholesterol
MF: C_{27}H_{46}O_{2}
FW: 402.7
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 2 years

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

Laboratory Procedures

25(S)-27-hydroxy Cholesterol is supplied as a crystalline solid. A stock solution may be made by dissolving the 25(S)-27-hydroxy cholesterol in the solvent of choice, which should be purged with an inert gas. 25(S)-27-hydroxy Cholesterol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 25(S)-27-hydroxy cholesterol in these solvents is approximately 20, 0.1, and 2 mg/ml, respectively.

25(S)-27-hydroxy Cholesterol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 25(S)-27-hydroxy cholesterol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 25(S)-27-hydroxy 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.

Description

The liver x receptors (LXRα and LXRβ) are nuclear hormone receptors whose native ligands, oxysterols, induce the expression of genes involved in cholesterol and fatty acid metabolism. 1 27-hydroxy Cholesterol, a sterol 27-hydroxylase-mediated cholesterol hydroxylation product, activates LXRA and LXRB in vitro with EC_{50} values of 85 and 71 nM, respectively, and is a potent suppressor of cholesterol biosynthesis. 2,3 25(S)-27 hydroxy Cholesterol is the less predominant-occurring (~20%) stereoisomer of the endogenous oxysterol 27-hydroxy cholesterol. 4,5

References