



# SZABO SCANDIC

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## Produktinformation



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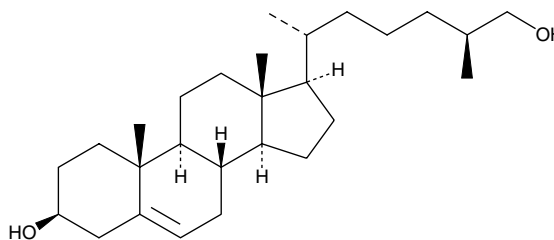
# Product Information



## 25(S)-27-hydroxy Cholesterol

Item No. 14791

<b>CAS Registry No.:</b>	56845-83-1
<b>Formal Name:</b>	(25S)-cholest-5-ene-3 $\beta$ ,26-diol
<b>Synonym:</b>	(25S)-26-hydroxy cholesterol
<b>MF:</b>	C <sub>27</sub> H <sub>46</sub> O <sub>2</sub>
<b>FW:</b>	402.7
<b>Purity:</b>	≥95%
<b>Stability:</b>	≥2 years at -20°C
<b>Supplied as:</b>	A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that 25(S)-27-hydroxy cholesterol be stored as supplied at -20°C. It should be stable for at least two years.

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. 25(S)-27-hydroxy Cholesterol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. 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.

The liver x receptors (LXR $\alpha$  and LXR $\beta$ ) are nuclear hormone receptors whose native ligands, oxysterols, induce the expression of genes involved in cholesterol and fatty acid metabolism.<sup>1</sup> 27-hydroxy Cholesterol, a sterol 27-hydroxylase-mediated cholesterol hydroxylation product, activates LXR $\alpha$  and LXR $\beta$  *in vitro* with EC<sub>50</sub> values of 85 and 71 nM, respectively, and is a potent suppressor of cholesterol biosynthesis.<sup>2,3</sup> 25(S)-27 hydroxy Cholesterol is the less predominant-occurring (~20%) stereoisomer of the endogenous oxysterol 27-hydroxy cholesterol.<sup>4,5</sup>

### References

1. Zhang, Y. and Mangelsdorf, D.J. LuXuRies of lipid homeostasis: The unity of nuclear hormone receptors, transcription regulation, and cholesterol sensing. *Mol. Interv.* **2**(2), 78-87 (2002).
2. Fu, X., Menke, J.G., Chen, Y., *et al.* 27-Hydroxycholesterol is an endogenous ligand for liver X receptor in cholesterol-loaded cells. *J. Biol. Chem.* **276**(42), 38378-38387 (2001).
3. Axelson, M. and Larsson, O. Low density lipoprotein (LDL) cholesterol is converted to 27-hydroxycholesterol in human fibroblasts. *J. Bio. Chem.* **270** (25), 15102-15110 (1995).
4. Javitt, N.B. 26-Hydroxycholesterol: Synthesis, metabolism, and biologic roles. *J. Lipid Res.* **31**, 1527-1533 (1990).
5. Javitt, N.B. 25R,26-Hydroxycholesterol revisited: Synthesis, metabolism, and biologic roles. *J. Lipid Res.* **43**, 665-670 (2002).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/14791](http://www.caymanchem.com/catalog/14791)

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

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