

25-hydroxy Cholesterol

Catalog Number :2144674

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Synonyms: 25-hydroxycholesterol, (3beta)-isomer, 5-cholestene-3beta,25-diol

Chemical Name: (3S,8S,9S,10R,13R,14S,17R)-17-[(2R)-6-hydroxy-6-methylheptan-2-yl]-10,13-dimethyl-2,3,4,7,8,9,11,12,14,15,16,17-dodecahydro-1H-cyclopenta[a]phenanthren-3-ol

Molecular Formula: C₂₇H₄₆O₂

Molecular Weight: 402.7

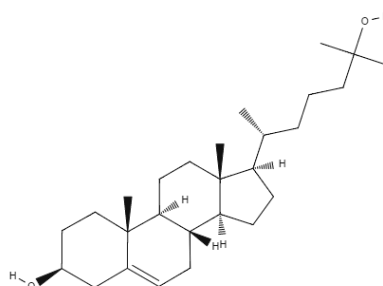
CAS Number: 2140-46-7

Purity: ≥98%

Applications: FA

Formulation: Crystalline solid

Storage: Product should be kept at -20°C.



Description

25-hydroxy Cholesterol is a dietary cholesterol derivative with a side chain substituted oxysterol that is capable of triggering the activation of many cholesterol molecules. It has been reported to activate ABCA1 signaling, atherosclerosis modulation, and induces apoptosis in human cell lines through caspases activation and bcl-2 downregulation. 25-hydroxy Cholesterol is immunomodulating and is capable of suppressing macrophage differentiation from monocytes.

Preparation & Storage

Soluble in organic solvents such as ethanol or DMSO.

References

1. Peng, S. K., Taylor, C. B., Hill, J. C., Morin, R. J. (1985). Cholesterol oxidation derivatives and arterial endothelial damage. *Atherosclerosis*, 54(2), 121-133.
2. Erickson, S. K., Matsui, S. M., Shrewsbury, M. A., Cooper, A. D., Gould, R. G. (1978). Effects of 25-hydroxycholesterol on rat hepatic 3-hydroxy-3-methylglutaryl coenzyme A reductase activity in vivo, in perfused liver, and in hepatocytes. *Journal of Biological Chemistry*, 253(12), 4159-4164.
3. Aupeix, K., Weltin, D., Mejia, J. E., Christ, M., Marchal, J., Freyssinet, J. M., Bischoff, P. (1995). Oxysterol-induced apoptosis in human monocytic cell lines. *Immunobiology*, 194(4), 415-428.