

Product Data Sheet

Product Name: Brassicasterol

Cat. No.: GC19530

Chemical Properties

Cas. No. 474-67-9

Chemical Name ergosta-5,22E-dien-3 β -ol

SMILES CC(C)[C@@H](C)/C=C/[C@@H](C)[C@@]1([H])CC[C@@]2([H])C3=CC=C4C[C@@H](O)CC[C@]4(C)C3=CC[C@@]21C

Formula C₂₈H₄₆O M.Wt 398.7

Solubility DMF: 2 mg/ml, DMSO: 0.1 mg/ml, Ethanol: 20 mg/ml, Ethanol: PBS (pH 7.2) (1:2): 0.3 mg/ml
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Caution: Product has not been fully validated for medical applications. For research use only.

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Brassicasterol is a phytosterol found in canola and rapeseed oils, marine algae, and shellfish.[1] It inhibits recombinant sterol $\Delta 24$ -reductase with a K_i value of 42.7 μ M in vitro. Brassicasterol increases accumulation of demosterol, a cholesterol precursor and substrate of sterol $\Delta 24$ -reductase, and inhibits cholesterol formation in HL-60 cells in a dose-dependent manner. It also inhibits the hemolytic activity of pneumolysin from *S. pneumoniae* without affecting bacterial growth at concentrations up to 1,000 μ g/ml.[2]

Reference:

- [1]. Fernández, C., Suárez, Y., Ferruelo, A.J., et al. Inhibition of cholesterol biosynthesis by $\Delta 22$ -unsaturated phytosterols via competitive inhibition of sterol $\Delta 24$ -reductase in mammalian cells *Biochem. J.* 366(Pt 1), 109-119 (2002).
- [2]. Li, H., Zhao, X., Deng, X., et al. Insights into structure and activity of natural compound inhibitors of pneumolysin *Sci. Rep.* 7:42015, (2017).

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