

## Product Data Sheet

Product Name: 8-Epixanthatin

Cat. No.: GF17531

### Chemical Properties

Cas. No. 30890-35-8

Formula C<sub>15</sub>H<sub>18</sub>O<sub>3</sub>

M.Wt 246.302

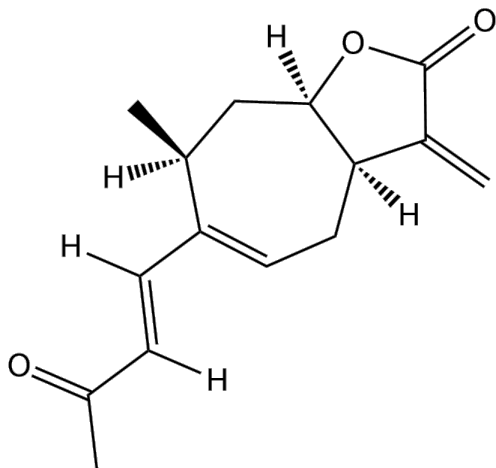
Solubility DMSO : 50 mg/mL (203.00 mM;  
Need ultrasonic)

Storage 2-8°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



### Protocol

#### Cell experiment [1]:

Cell lines DU145 cells

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

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|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Preparation Method  | DU145 cells were grown in RPMI 1640 medium supplemented with 10% fetal bovine serum, 100U/ml penicillin, and 0.1mg/ml streptomycin in 5% CO <sub>2</sub> at 37°C. 5×10 <sup>3</sup> DU145 cells/ml were seeded into 96-well microplates for 24h. The wells were replenished with fresh complete medium containing different concentrations of 8-Epixanthatin (0, 2, 5, 10, and 20μM) or 0.1% DMSO for 24h. Then, the cell viability was detected. |
| Reaction Conditions | 0, 2, 5, 10, and 20μM; 24h                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Applications        | 8-Epixanthatin treatment significantly reduced the cell viability of DU145 cells in a dose-dependent manner.                                                                                                                                                                                                                                                                                                                                      |

### Animal experiment [1]:

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Animal models      | Female BALB/c mice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Preparation Method | Female BALB/c mice (6 weeks old) were kept in temperature-controlled (21°C-25°C) and humidity-maintained (40%-70%) rooms with a 12-h light/dark cycle. Water and food were provided freely. DU145 cells (9×10 <sup>6</sup> cells/mouse) were subcutaneously injected into the right flank of mice. Tumor growth was measured with calipers using the formula volume=1/2 (length×width×height). Vehicle and 8-Epixanthatin (50mg/kg) were intraperitoneally injected 5 days per week for 25 days starting on day 1 (the day after cell injection; six mice per group). On day 25, the mice were sacrificed, and the tumors were removed and weighed. |
| Dosage form        | 50mg/kg; 5 times a week for 25 days; i.p.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Applications       | 8-Epixanthatin treatment significantly inhibited tumor growth in the DU145 mouse xenograft model.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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### References:

[1] Lee Y J, Choi J, Yoon Y J, et al. 8-Epi-xanthatin induces the apoptosis of DU145 prostate carcinoma cells through signal transducer and activator of transcription 3 inhibition and reactive oxygen species generation[J]. Phytotherapy Research, 2021, 35(3): 1508-1520.

### Background

8-Epixonathatin is a light-induced growth inhibitor that regulates the phototropic curvature in sunflower hypocotyls [1]. 8-Epixonathatin inhibits auxin-induced growth of sunflower hypocotyl and oat coleoptile sections as well as the elongation of cress roots [2]. 8-Epixonathatin can be used as an internal reference to develop HPLC–UV or HPLC-MS/MS measurements for the examination of related compounds in plants[3].

In vitro, 8-Epixonathatin treatment for 12 hours significantly reduced the level of p-STAT3-Y705 in DU145 cells, with an IC<sub>50</sub> value of 3.2μM[4].

In vivo, 8-Epixonathatin treatment via intraperitoneal injection at a dose of 50mg/kg, 5 times a week for 25 days, significantly inhibited tumor growth in the DU145 mouse xenograft model without affecting body weight[4].

### References:

[1] Kühne M, Hamscher G, Körner U, et al. Formation of anhydrotetracycline during a high-temperature treatment of animal-derived feed contaminated with tetracycline[J]. Food chemistry, 2001, 75(4): 423-429.

[2] Yokotani-Tomita K, Kato J, Kosemura S, et al. Light-induced auxin-inhibiting substance from sunflower seedlings[J]. Phytochemistry, 1997, 46(3): 503-506.

[3] Spring O, Schmauder K, Lackus N D, et al. Spatial and developmental synthesis of endogenous sesquiterpene lactones supports function in growth regulation of sunflower[J]. Planta, 2020, 252(1): 2.

[4] Lee Y J, Choi J, Yoon Y J, et al. 8-Epi-xanthatin induces the apoptosis of DU145 prostate carcinoma cells through signal transducer and activator of transcription 3 inhibition and reactive oxygen species generation[J]. Phytotherapy Research, 2021, 35(3): 1508-1520.

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