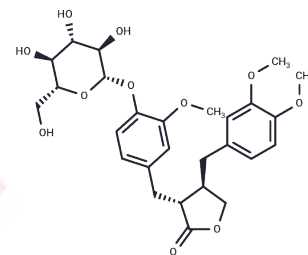


Arctiin

Chemical Properties

| | |
|-------------------|--|
| CAS No. : | 20362-31-6 |
| Formula: | C ₂₇ H ₃₄ O ₁₁ |
| Molecular Weight: | 534.55 |
| Appearance: | no data available |
| Storage: | keep away from moisture,store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year |



Biological Description

| | |
|---------------|--|
| Description | Arctiin (Arctigenin-4-glucoside) acts on an agonists of the adiponectin receptor 1 with anti-cancer effects. |
| Targets(IC50) | Adiponectin Receptor |
| In vitro | Arctiin induces growth inhibition and dephosphorylates the tumor-suppressor retinoblastoma protein in human immortalized keratinocyte HaCaT cells. The growth inhibition caused by arctiin is associated with the downregulation of cyclin D1 protein expression. The arctiin-induced suppression of cyclin D1 protein expression occurs in various types of human tumor cells, including osteosarcoma, lung, colorectal, cervical and breast cancer, melanoma, transformed renal cells and prostate cancer[1]. |
| In vivo | Arctiin has anti-cancer properties in animal models. arctiin has a remarkable anti-tumor-promoting effect as seen in a two-stage carcinogenesis test of mouse skin tumors induced by 7,12-dimethylbenz[α]anthracene(DMBA) as an initiator and 12-Otetradecanoyl phorbol-13-acetate (TPA) as a promoter by topical and oral administration. It also has a protective effect on 2-amino-1-methyl-6- phenylimidazo [4,5-β]pyridine (PhIP)-induced carcinogenesis particularly in the mammary gland during the promotion period[1]. Arctiin is orally effective against either IFV-inoculated normal or 5-fluorouracil (5-FU)-treated mice[3]. |
| Cell Research | HaCaT cells are plated at 1×10 ⁵ cells in 25-mm-diameter dishes. Twenty-four hours after plating, various concentrations of arctiin are added to the culture medium. From the first to the third day after plating, the number of viable cells is counted by the trypan blue dye exclusion test.(Only for Reference) |

Solubility Information

| | |
|------------|---|
| Solubility | H ₂ O: 37 mg/mL (69.22 mM),Sonication is recommended. Ethanol: 93 mg/mL (173.98 mM),Sonication is recommended. DMSO: 50 mg/mL (93.54 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|---|

A DRUG SCREENING EXPERT

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|-----------|------------|
| 1 mM | 1.8707 mL | 9.3537 mL | 18.7073 mL |
| 5 mM | 0.3741 mL | 1.8707 mL | 3.7415 mL |
| 10 mM | 0.1871 mL | 0.9354 mL | 1.8707 mL |
| 50 mM | 0.0374 mL | 0.1871 mL | 0.3741 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

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Liu Y, Hou M, Pan Z, et al. Arctiin-reinforced antioxidant microcarrier antagonizes osteoarthritis progression.

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Sun Y, et al. PLoS One. 2013, 8(5):e63354.

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