

Braylin

Chemical Properties

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|-------------------|--|
| CAS No.: | 6054-10-0 |
| Formula: | C ₁₅ H ₁₄ O ₄ |
| Molecular Weight: | 258.3 |
| Appearance: | N/A |
| Storage: | 0-4°C for short term (days to weeks), or -20°C for long term (months). |

Biological Description

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|----------------------------|--|
| Description | Braylin has anti-inflammatory, antinociceptive and immunomodulatory effects, which possibly act through the glucocorticoid receptor activation and by inhibition of the transcriptional activity of NF- κ B. Braylin is also a phosphodiesterase-4 inhibitor, it could represent an ideal prototype of glucocorticoid receptor ligand, able to induce synergic immunomodulatory effects. |
| Targets(IC ₅₀) | IFN- γ : None IL Receptor: None NF- κ B: None TGF- β /Smad: None TNF- α : None |
| In vitro | Natural products are excellent resources for finding lead structures for the development of chemotherapeutic agents. Coumarins are a class of natural compounds found in a variety of plants. METHODS AND RESULTS: In this study, we evaluated the cytotoxic potential of coumarins isolated from <i>Prangos ferulacea</i> (L.) Lindl. in PC3, SKNMC, and H1299 (p53 null) human carcinoma cell lines. Osthole proved to be an outstanding potent cytotoxic agent especially against PC3 cells. Isoimperatorin exhibited moderate inhibitory effect against SKNMC and PC3 cell lines. Oxypeucedanin and Braylin did not display any cytotoxic activity. In the next set of experiments, the apoptotic potentials of osthole and isoimperatorin were investigated. Induction of apoptosis by isoimperatorin was accompanied by an increase in activation of caspase-3, -8, and -9 in SKNMC cells and caspase-3 and -9 in PC3 cells. Moreover, isoimperatorin induced apoptosis by upregulating Bax and Smac/DIABLO genes in PC3 and SKNMC cells. Osthole induced apoptosis by downregulating antiapoptotic Bcl-2 in only PC3 cells and upregulating the proapoptotic genes Bax and Smac/DIABLO in PC3, SKNMC, and H1299 cells. CONCLUSIONS: The effects of osthole on H1299 cells are important because the loss of p53 has been associated with poor clinical prognosis in cancer treatment. |

Solubility Information

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|------------|---|
| Solubility | < 1 mg/ml refers to the product slightly soluble or insoluble |
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Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|----------|-----------|-----------|
| 1 mM | 3.871 mL | 19.357 mL | 38.715 mL |
| 5 mM | 0.774 mL | 3.871 mL | 7.743 mL |
| 10 mM | 0.387 mL | 1.936 mL | 3.871 mL |
| 50 mM | 0.077 mL | 0.387 mL | 0.774 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Comparative Evaluation of Cytotoxic and Apoptogenic Effects of Several Coumarins on Human Cancer Cell Lines: Osthole Induces Apoptosis in p53-Deficient H1299 Cells. Adv Pharmacol Sci. 2014;2014:847574.

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