Inhibitors, Agonists, Screening Libraries
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Data Sheet

Product Name: Cinobufagin
Cat. No.: HY-N0421
CAS No.: 470-37-1
Molecular Formula: C26H34O6
Molecular Weight: 442.54
Target: Autophagy
Pathway: Autophagy
Solubility: DMSO: ≥ 43 mg/mL

BIOLOGICAL ACTIVITY:
Cinobufagin, a kind of Chinese materia medica with antitumor effect, is widely used in clinical practice, especially in anti-liver cancer.

IC50 value:

Target:

In vitro: Cinobufagin inhibited proliferation of cancer cells at doses of 0.1, 1, or 10 μM after 2–4 days of culture. Cytotoxicity of cinobufagin on the DU145 and LNCaP cells was dose-dependent. Cinobufagin increased [Ca2+]i and apoptosis in cancer cells after a 24-hr culture as well as caspase 3 activities in DU145 and PC3 cells and caspase 9 activities in LNCaP cells [1]. Cinobufagin suppresses cell proliferation and causees apoptosis in prostate cancer cells via a sequence of apoptotic modulators, including Bax, cytochrome c and caspsases [2].

In vivo:

PROTOCOL (Extracted from published papers and Only for reference)
Cell assay [4] The inhibition of cell growth was determined by an MTT assay. Briefly, four NSCLC cells were treated with various concentrations of CB and platinum drugs, including cisplatin, gemcitabine, docetaxel, and paclitaxel for 24 hours. Following treatment, the MTT reagent was added (100 μl/ml) and the cells were further incubated at 37°C for 4 hours. Then, 150 μl DMSO was added to dissolve the formazan crystals and absorbance was read in a micro-plate reader (Thermo Scientific, Waltham, MA, USA) at 570 nm. The viable cell number was directly proportional to the production of formazan. The growth inhibition assay was repeated three times. The IC50 values were calculated using GraphPad Prism 5 (La Jolla, CA, USA). The percentage of inhibition was calculated as follows: Inhibitory ratio (%)=(A[control]–A[sample])/A[control]×100%.

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

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