

## Britannin

## Chemical Properties

CAS No. : 33627-28-0

Formula: C<sub>19</sub>H<sub>26</sub>O<sub>7</sub>

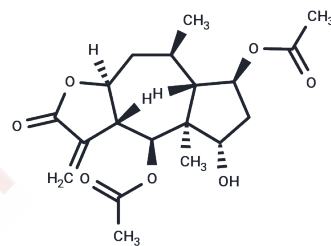
Molecular Weight: 366.41

Storage:

Keep away from direct sunlight,Keep away from moisture,Store at low temperature,Store under nitrogen

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Britannin, a sesquiterpene lactone, inhibits proliferation and induces apoptosis through the mitochondrial signaling pathway in human breast cancer cells.
Targets(IC50)	Apoptosis,NOD-like Receptor (NLR),AMPK,Autophagy,Pyroptosis
In vitro	Britannin, a sesquiterpene lactone isolated from Asteraceae family, has antiproliferative activity on the MCF-7 and MDA-MB-468 human breast cancer cells. Annexin V/propidium iodide (PI) staining, Hoechst 33258 staining, and caspase-3/9 activity assay confirmed that britannin is able to induce apoptosis in MCF-7 and MDA-MB-468 cells. The expression of Bcl-2 was noticeably decreased in response to britannin treatment, while the expression of Bax protein was increased, which were positively correlated with elevated expression of p53. Moreover, britannin also increased reactive oxygen species (ROS) generation which in turn triggered the loss of mitochondrial transmembrane potential ( $\Delta\Psi_m$ ) and the subsequent release of cytochrome c from mitochondria into cytosol.

## Solubility Information

Solubility	DMSO: 45 mg/mL (122.81 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.46 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.7292 mL	13.6459 mL	27.2918 mL
5 mM	0.5458 mL	2.7292 mL	5.4584 mL
10 mM	0.2729 mL	1.3646 mL	2.7292 mL
50 mM	0.0546 mL	0.2729 mL	0.5458 mL

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Hamzeloo-Moghadam M , Aghaei M , Fallahian F , et al. Britannin, a sesquiterpene lactone, inhibits proliferation and induces apoptosis through the mitochondrial signaling pathway in human breast cancer cells[J]. Tumor Biology, 2015, 36(2):1191-1198.

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