# Justicidin A

**Cat. No.:** HY-117078

**CAS No.:** 25001-57-4

**Molecular Formula:** $C_{22}H_{18}O_7$

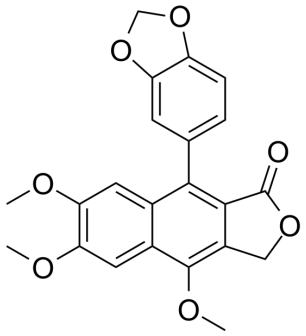
**Molecular Weight:** 394.37

**Target:** Apoptosis

**Pathway:** Apoptosis

**Storage:** 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 16.67 mg/mL (42.27 mM; ultrasonic and warming and heat to 60°C)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.5357 mL | 12.6784 mL | 25.3569 mL |
| | 5 mM | 0.5071 mL | 2.5357 mL | 5.0714 mL |
| | 10 mM | 0.2536 mL | 1.2678 mL | 2.5357 mL |

Please refer to the solubility information to select the appropriate solvent.

## BIOLOGICAL ACTIVITY

**Description**

justicidin A is a nature product that could be isolated form Justicia procumbens. justicidin A decreases the level of Ku70 leading to translocation of Bax from the cytosol to mitochondria to induce apoptosis. justicidin A can be used in research of cancer[1].

**In Vitro**

justicidin A (0-2.5 μM; 6 days) inhibits cell growth in colorectal cancer cells with $IC_{50}$ values of 0.110, 0.400, 0.020, 1.540 and 0.004 μM for HT-29, HCT 116, SiHa, MCF7 and T24 cells, respectively[1].

justicidin A (0.75 and 5 μM; 0-72 h) induces apoptosis in colorectal cancer cells[1].

justicidin A (0.75 and 5 μM; 0-72 h) induces the cleavage of caspases and their target proteins in human colorectal cancer cells[1].

justicidin A (0.75 and 5 μM; 0-72 h) damages mitochondria and releases cyto c and Smac from mitochondria[1].

justicidin A (0.75 and 5 μM; 0-96 h) decreases the level of Ku70 leading to translocation of Bax from the cytosol to mitochondria[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

| | |
|---|---|
| Cell Line: | HT-29, HCT 116, SiHa, MCF7 and T24 cells |

| | |
|---|---|
| Concentration: | 0-2.5 μM |
| Incubation Time: | 6 days |
| Result: | Inhibited cell growth in a dose-dependent manner. |

Apoptosis Analysis[1]

| | |
|---|---|
| Cell Line: | HT-29 and HCT 116 cells |
| Concentration: | 0.75 μM (HT-29 cells) and 5 μM (HCT 116 cells) |
| Incubation Time: | 0, 12, 16, 20, 24, 48, and 72 hours |
| Result: | Induced apoptosis in a time-dependent manner.<br>Increased the population of sub-G 1 cells in a time-dependent manner. |

Western Blot Analysis[1]

| | |
|---|---|
| Cell Line: | HT-29 and HCT 116 cells |
| Concentration: | 0.75 μM (HT-29 cells) and 5 μM (HCT 116 cells) |
| Incubation Time: | 0, 12, 16, 20, 24, 48, 72, and 96 hours |
| Result: | Decreased the amount of cytosolic Ku70 in HCT 116 cells and decreased (0.6-fold) at 48 h and reached the lowest level (0.33-fold) at 96 h. |

Western Blot Analysis[1]

| | |
|---|---|
| Cell Line: | HT-29 and HCT 116 cells |
| Concentration: | 0.75 μM (HT-29 cells) and 5 μM (HCT 116 cells) |
| Incubation Time: | 0, 12, 16, 20, 24, 48, and 72 hours |
| Result: | Induced the cleavage of caspases and their target proteins. |

**In Vivo**

justicidin A (6.2 mg/kg; p.o.; daily, for 56 days) suppresses the growth of human colorectal cancer cells in mice[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | NOD-SCID mice with HT-29 cells xenografts[1] |
| Dosage: | 6.2 mg/kg |
| Administration: | Oral administration; daily, for 56 days |
| Result: | Inhibited tumor growth and decreased tumor weight. |



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