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# Produktinformation

- Forschungsprodukte & Biochemikalien
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- Laborgeräte & Service

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See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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# Cardamonin

**Cat. No.:** HY-N0279

**CAS No.:** 18956-16-6

**Molecular Formula:** $C_{16}H_{14}O_4$

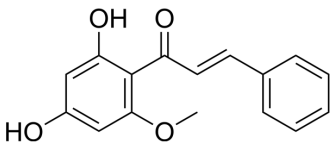
**Molecular Weight:** 270.28

**Target:** NF-κB; STAT; Wnt; β-catenin; Bcl-2 Family; Apoptosis

**Pathway:** NF-κB; JAK/STAT Signaling; Stem Cell/Wnt; Apoptosis

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 2 years |
| | -20°C | 1 year |




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 125 mg/mL (462.48 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 3.6999 mL | 18.4993 mL | 36.9987 mL |
| | 5 mM | 0.7400 mL | 3.6999 mL | 7.3997 mL |
| | 10 mM | 0.3700 mL | 1.8499 mL | 3.6999 mL |

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.17 mg/mL (8.03 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Cardamonin can be found from cardamom, and target various signaling molecules, transcriptional factors, cytokines and enzymes. Cardamonin can inhibit mTOR, NF-κB, Akt, STAT3, Wnt/β-catenin and COX-2. Cardamonin shows anticancer, anti-inflammatory, antimicrobial and antidiabetic activities[1][2].

**In Vitro**

Cardamonin (5-40 μM, 24 or 48 h) treatment inhibits gastric cancer cell growth[3].
Cardamonin (10-30 μM, 24 or 48 h) treatment can regulate the expression of apoptosis relative protein[3].
Cardamonin (10-30 μM, 24 or 48 h) treatment can inhibit STAT3 phosphorylation[3].
Cardamonin (0-100 μM, 24 h) treatment improves the anti-oxidative capacity in HL-1 cells[4].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

| | |
|---|---|
| Cell Line: | AGS, MGC-803, BGC-823 cells |
| Concentration: | 5, 10, 20, 30, 40 μM |
| Incubation Time: | 24 or 48 hours |
| Result: | Inhibited cell growth in a concentration-dependent manner. |

Western Blot Analysis[3]

| | |
|---|---|
| Cell Line: | AGS, MGC-803, BGC-823 cells |
| Concentration: | 10, 20, 30 μM |
| Incubation Time: | 24 or 48 hours |
| Result: | Down-regulated Bcl-2, increased Bax protein expression, and increased the protein expression levels of Caspase-3. |

Western Blot Analysis[3]

| | |
|---|---|
| Cell Line: | AGS cells |
| Concentration: | 10, 20, 30 μM |
| Incubation Time: | 24 or 48 hours |
| Result: | Suppressed the phosphorylation level of STAT3. |

Western Blot Analysis[4]

| | |
|---|---|
| Cell Line: | HL-1 cells |
| Concentration: | 0, 25, 50, 100 μM |
| Incubation Time: | 24 hours |
| Result: | Showed anti-oxidant effects in doxorubicin-stimulated cardiomyocytes. |

**In Vivo**

Cardamonin (oral gavage; 20, 40 or 80 mg/kg; once) treatments alleviates doxorubicin-induced cardiotoxicity and inhibits apoptosis in doxorubicin-challenged mice[4].

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

| | |
|---|---|
| Animal Model: | Male C57BL/6 J mice (8 weeks old, 20-22 g)[4] |
| Dosage: | 20, 40 or 80 mg/kg |
| Administration: | Oral gavage; 20, 40 or 80 mg/kg; once |
| Result: | Rescued the reduction of LVEF% and LVFS% by doxorubicin, reduced the increasement of serum LDH, CK-MB and Tn-T levels by doxorubicin in a dose-dependent manner, improved doxorubicin-induced histological changes, and attenuated collagen accumulation in cardiac sections by doxorubicin in a dose-dependent manner. |

| | |
|---|---|
| Animal Model: | Male C57BL/6 J mice (8 weeks old, 20-22 g)[4] |

| | |
|---|---|
| Dosage: | 20, 40 or 80 mg/kg |
| Administration: | Oral gavage; 20, 40 or 80 mg/kg; once |
| Result: | Rescued Bcl-2, and inhibited Bax and Caspase-3 cleavage in heart tissues from doxorubicin-challenged mice. |

## CUSTOMER VALIDATION

- Acta Pharm Sin B. 2023 Dec 16.
- Acta Pharm Sin B. 2021 Jan;11(1):143-155.
- Pharmacol Res. 2020 May;155:104751.
- Biomed Pharmacother. 2020 Feb;122:109547.
- Phytother Res. 2022 Feb 10.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Javaria Nawaz, et al. Cardamonin: A new player to fight cancer via multiple cancer signaling pathways. Life Sci. 2020 Jun 1;250:117591.

[2]. Kai Wang, et al. Cardamonin, a natural flavone, alleviates inflammatory bowel disease by the inhibition of NLRP3 inflammasome activation via an AhR/Nrf2/NQO1 pathway. Biochem Pharmacol. 2018 Sep;155:494-509.

[3]. Zheng Wang, et al. Cardamonin exerts anti-gastric cancer activity via inhibiting LncRNA-PVT1-STAT3 axis. Biosci Rep. 2019 May 17;39(5):BSR20190357.

[4]. Wang Qi, et al. Cardamonin protects against doxorubicin-induced cardiotoxicity in mice by restraining oxidative stress and inflammation associated with Nrf2 signaling. Biomed Pharmacother. 2020 Feb;122:109547.



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