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# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


**SZABO-SCANDIC HandelsgmbH**

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

# GLI1-IN-1

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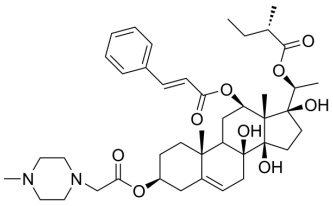
|---|---|
| **Cat. No.:** | HY-161459 |
| **CAS No.:** | 2923907-92-8 |
| **Molecular Formula:** | $C_{42}H_{60}N_2O_9$ |
| **Molecular Weight:** | 736.93 |
| **Target:** | Apoptosis; Hedgehog; Gli |
| **Pathway:** | Apoptosis; Stem Cell/Wnt |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

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| **Description** | GLI1-IN-1 (CBC-1) is a GLI-1 inhibitor with excellent water solubility and anticancer activity. GLI1-IN-1 can induce apoptosis and suppress the growth of colorectal cancer by inhibiting the Hedgehog(HH) ($IC_{50}$=1.3 μM) pathway[1]. |
| **$IC_{50}$ & Target** | IC50: 1.3 μM (Hedgehog)[1]. |

**In Vitro**

GLI1-IN-1 (CBC-1) (5-40 μM; 24-48 h) exhibits anticancer activity by inhibiting cell proliferation through suppressing the mRNA and protein expression of the HH pathway in HT-29, SW-480, and HCT-116 cells, with $IC_{50}$ values of 7.13, 15.31, and 3.33 μM, respectively. GLI1-IN-1 (5-40 μM; 24 h) can also induce apoptosis in HT-29 cells[1].

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

Apoptosis Analysis[1]

| | |
|---|---|
| Cell Line: | HT-29 |
| Concentration: | 5, 10, 20, 40 μM; |
| Incubation Time: | 24 h |
| Result: | Increased the number of apoptotic cells in a concentration-dependent manner. |

RT-PCR[1]

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|---|---|
| Cell Line: | HT-29 |
| Concentration: | 5, 10, 20, 40 μM; |
| Incubation Time: | 24 h, 48 h |
| Result: | Decreased the mRNA expression of SHH, SMO, GLI1, and PTCH in a concentration- and time-dependent manner.<br>Significantly reduced the mRNA expression levels of the apoptosis-related factor BCL-2 and increased the levels of the apoptosis-promoting factor BAX in a dose-dependent manner. |

Western Blot Analysis[1]

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|---|---|
| Cell Line: | HT-29 |
| Concentration: | 5, 10, 20, 40 μM; |
| Incubation Time: | 24 h |
| Result: | Decreased the protein expression of SHH, SMO and GLI1 in a concentration-dependent manner. |

**In Vivo**

CBC-1 (50 mg/kg; i.p.; once daily for 16 days) can effectively inhibit tumor growth in xenograft models, with a remarkable tumor inhibition rate of 68% in BALB/c/nu/nu nude mice[1].

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

| | |
|---|---|
| Animal Model: | Tumour xenograft BALB/c/nu/nu nude mice model[1]. |
| Dosage: | 50 mg/kg |
| Administration: | Intraperitoneal injection (i.p.); Once daily for 16 days |
| Result: | Significantly reduced the size and weight of HT29 tumor xenografts.<br>Decreased the protein expression of GLI -1. |

## REFERENCES

[1]. Chen J, et al. CBC-1 as a Cynanbungeigenin C derivative inhibits the growth of colorectal cancer through targeting Hedgehog pathway component GLI 1. Steroids. Published online April 11, 2024.



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA