# Belotecan

**Cat. No.:** HY-13566

**CAS No.:** 256411-32-2

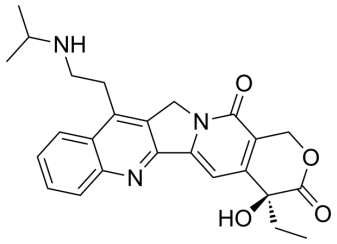
**Molecular Formula:** $C_{25}H_{27}N_3O_4$

**Molecular Weight:** 433.5

**Target:** Topoisomerase; Apoptosis

**Pathway:** Cell Cycle/DNA Damage; Apoptosis

**Storage:** Please store the product under the recommended conditions in the Certificate of Analysis.




## BIOLOGICAL ACTIVITY

**Description**

Belotecan (CKD-602 free base) is a DNA topoisomerase I inhibitor. Belotecan induces cell apoptosis and cell-cycle arrest. Belotecan is a camptothecin analogue with anti-tumor effects, it can be used for the research of cancer[1].

**$IC_{50}$ & Target**

IC50: 30 ng/mL (Caski cells), 150 ng/mL (HeLa cells), 150 ng/mL (SiHa cells)[1]

**In Vitro**

Belotecan (0-600 ng/mL; 0-72 h) time- and dose-dependently inhibits viability of Caski cells, HeLa cells and SiHa cells at 48 h with $IC_{50}$ values of 30, 150 and 150 ng/mL, respectively[1].

Belotecan (0-150 ng/mL; 48 h) induces cell apoptosis and cell-cycle arrest, and affects PARP, cleaved PARP, BAX, p53, Ser15, cell cycle related protein expression and cancer invasion in cervical cancer[1].

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

Apoptosis Analysis[1]

| | |
|---|---|
| Cell Line: | Caski, HeLa and SiHa cell lines |
| Concentration: | 0-150 ng/mL |
| Incubation Time: | 48 h |
| Result: | Showed strong pro-apoptotic activities to Caski, HeLa and SiHa cells. |

Western Blot Analysis[1]

| | |
|---|---|
| Cell Line: | Caski, HeLa and SiHa cell lines |
| Concentration: | 0-150 ng/mL |
| Incubation Time: | 48 h |
| Result: | Increased the expression of PARP, cleaved PARP, BAX, p53, Ser15, cyclin B1, phosphorylated cyclin B1 and phospho-cdc2 (Tyr15) protein, and decreased MMP2 and VEGF protein expression. |

Cell Cycle Analysis[1]

| | |
|---|---|
| Cell Line: | Caski, HeLa and SiHa cell lines |

| | |
|---|---|
| Concentration: | 0-150 ng/mL |
| Incubation Time: | 48 h |
| Result: | Induced cell-cycle arrest in the G2/M phase in cervical cancer. |

Cell Invasion Assay[1]

| | |
|---|---|
| Cell Line: | Caski, HeLa and SiHa cell lines |
| Concentration: | 0-150 ng/mL |
| Incubation Time: | 48 h |
| Result: | Inhibited cancer invasion in cervical cancer. |

**In Vivo**

Belotecan (25 mg/kg; i.v. for 16 days at 4-day intervals) inhibits tumor growth in CaSki-xenografts nude mice[1].

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

| | |
|---|---|
| Animal Model: | BALB/c-nude mice with CaSki cells injection[1] |
| Dosage: | 25 mg/kg |
| Administration: | Intravenous injection; 25 mg/kg; 16 days at 4-day intervals |
| Result: | Significantly inhibited the tumor growth and showed no significant difference in bodyweight of xenograft mice and the controls. |

## CUSTOMER VALIDATION

- J Mol Med (Berl). 2019 Aug;97(8):1183-1193.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Lee S, et al. CKD-602, a topoisomerase I inhibitor, induces apoptosis and cell-cycle arrest and inhibits invasion in cervical cancer. Mol Med. 2019 May 28;25(1):23.

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

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