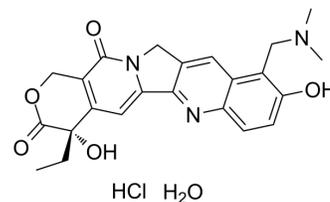


## Topotecan hydrochloride hydrate

<b>Cat. No.:</b>	HY-13768C
<b>CAS No.:</b>	1044663-62-8
<b>Molecular Formula:</b>	C <sub>23</sub> H <sub>26</sub> ClN <sub>3</sub> O <sub>6</sub>
<b>Molecular Weight:</b>	475.92
<b>Target:</b>	Topoisomerase; Apoptosis; Autophagy
<b>Pathway:</b>	Cell Cycle/DNA Damage; Apoptosis; Autophagy
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Topotecan hydrochloride hydrate is an orally active and potent Topoisomerase I inhibitor. Topotecan hydrochloride hydrate induces cell cycle arrest in G <sub>0</sub> /G <sub>1</sub> and S phases and promotes apoptosis. Topotecan hydrochloride hydrate shows anticancer activity <sup>[1]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	Topoisomerase I
<b>In Vitro</b>	<p>Topotecan hydrochloride hydrate obviously inhibits proliferation of human glioma cells and glioma stem cells (GSCs) in a dose- and time-dependent manner<sup>[1]</sup>.</p> <p>Topotecan hydrochloride hydrate (0-40 μM) obviously inhibits the cell viability compared with the control groups, in a dose-dependent manner<sup>[1]</sup>.</p> <p>Topotecan hydrochloride hydrate shows anti-proliferation activity against U251, U87, GSCs-U251 and GSCs-U87 cells, with IC<sub>50</sub> values of 2.73±0.25, 2.95±0.23, 5.46±0.41, and 5.95±0.24 μM, respectively<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	<p>Topotecan hydrochloride hydrate (0.5, 1.0, and 1.5 mg/kg; Orally, daily) causes greater reduction in microvascular density in an ovarian cancer model, but the mice treated with 1.5 mg/kg daily, oral Topotecan show decreased food intake, and a lesser antitumor effect<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### CUSTOMER VALIDATION

- J Extracell Vesicles. 2022 Apr;11(4):e12206.
- Nat Commun. 2019 Aug 21;10(1):3761.
- J Exp Clin Cancer Res. 2018 Dec 20;37(1):321.
- Cancers (Basel). 2022, 14(1), 193.
- Acta Pharmacol Sin. 2021 Jan;42(1):108-114.

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## REFERENCES

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- [1]. Zhang FL, et al. PLoS One. 2013 Nov 26;8(11):e81815. Topoisomerase I inhibitors, Shikonin and Topotecan, inhibit growth and induce apoptosis of glioma cells and glioma stem cells.
- [2]. Kumar S, et al. Metronomic oral topotecan with pazopanib is an active antiangiogenic regimen in mouse models of aggressive pediatric solid tumor. Clin Cancer Res. 2011 Sep 1;17(17):5656-67.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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