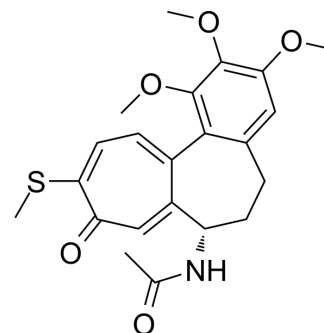


## Thiocolchicine

<b>Cat. No.:</b>	HY-116852
<b>CAS No.:</b>	2730-71-4
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>25</sub> NO <sub>5</sub> S
<b>Molecular Weight:</b>	415.5
<b>Target:</b>	Microtubule/Tubulin; Apoptosis
<b>Pathway:</b>	Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Thiocolchicine, a derivative modified in the C Ring of Colchicine (HY-16569) with enhanced biological properties. Thiocolchicine is a potent inhibitor of tubulin polymerization (IC <sub>50</sub> =2.5 μM) and competitively binds to tubulin with a K <sub>i</sub> of 0.7 μM. Thiocolchicine induces cell apoptosis <sup>[1][2]</sup> . Thiocolchicine can be used as an ADC cytotoxin in ADC technology.
<b>In Vitro</b>	Thiocolchicine is against MCF-7, LoVo, LoVo/DX, A-549 and BALB/3T3 cells with IC <sub>50</sub> values of 0.01 μM, 0.021 μM, 0.398 μM, 0.011 μM and 0.114 μM, respectively <sup>[3]</sup> . Thiocolchicine (1 nM-100 μM; 24-72 hours) shows a relationship between cell cycle blocking activity and growth inhibition in breast cancer cells. It inhibits cell proliferation of MDA-MB-231 and multidrug resistant (MDR) MCF-7 ADR <sub>r</sub> breast cancer cells with IC <sub>50</sub> s of 0.6 nM and 400 nM, respectively, as well as MDR CEM-VBL leukemia cells (IC <sub>50</sub> =50 nM) <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Klaus M.Hahn, et al. Structural requirements for the binding of colchicine analogs to tubulin: the role of the C-10 substituent. *Bioorganic & Medicinal Chemistry Letters*. Volume 1, Issue 9, 1991, Pages 471-476
- [2]. R De Vincenzo, et al. Antiproliferative Activity of Colchicine Analogues on MDR-positive and MDR-negative Human Cancer Cell Lines. *Anticancer Drug Des.* 1998 Jan;13(1):19-33.

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

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