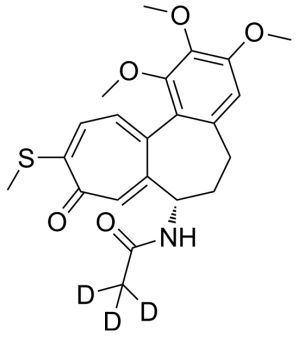
Thiocolchicine-d_3

Cat. No.:	HY-116852S
CAS No.:	1314417-95-2
Molecular Formula:	$C_{22}H_{22}D_3NO_5S$
Molecular Weight:	418.52
Target:	Microtubule/Tubulin; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	Thiocolchicine-d_3 is deuterium labeled Thiocolchicine. Thiocolchicine, a derivative modified in the C Ring of Colchicine (HY-16569) with enhanced biological properties. Thiocolchicine is a potent inhibitor of tubulin polymerization (IC50=2.5 μM) and competitively binds to tubulin with a Ki of 0.7 μM. Thiocolchicine induces cell apoptosis[1][2]. Thiocolchicine can be used as an ADC cytotoxin in ADC technology.
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. 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.

[3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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