
Product Data Sheet

Product Name: Thiocolchicine-d3

Cat. No.: GC68366

Chemical Properties

Cas. No. 1314417-95-2

Formula $C_{22}H_{22}D_3NO_5S$ M.Wt 418.52

Solubility Storage 4°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

Thiocolchicine-d3 is deuterium labeled Thiocolchicine. Thiocolchicine, a derivative modified in the C Ring of Colchicine with enhanced biological properties. Thiocolchicine is a potent inhibitor of tubulin polymerization ($IC_{50}=2.5 \mu M$) and competitively binds to tubulin with a K_i of $0.7 \mu M$. Thiocolchicine induces cell apoptosis^{[1][2]}. Thiocolchicine can be used as an ADC cytotoxin in ADC technology.

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].

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

[2]. 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

[3]. R De Vincenzo, et al. Antiproliferative Activity of Colchicine Analogues on MDR-positive and MDR-negative Human Cancer Cell Lines. *Anticancer Drug Des.* 1998

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Jan;13(1):19-33.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA