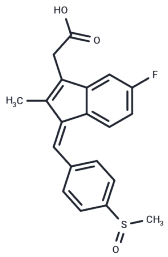
Data Sheet (Cat.No.T0459)

TargetMol

Sulindac

Chemical Properties



CAS No. : 38194-50-2

Formula: C20H17FO3S

Molecular Weight: 356.41

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Sulindac (Sulindac sulfoxide) is a sulfinylindene derivative prodrug with potential antineoplastic activity. Converted in vivo to an active metabolite, sulindac, a nonsteroidal anti-inflammatory drug (NSAID), blocks cyclic guanosine monophosphate-phosphodiesterase (cGMP-PDE), an enzyme that inhibits the normal apoptosis signal pathway; this inhibition permits the apoptotic signal pathway to proceed unopposed, resulting in apoptotic cell death.
Targets(IC50)	Autophagy,COX
In vitro	In intestinal tissues of Min/+ mice, Sulindac does not alter the levels of PGE2 and LTB4 but reduces the number of tumors. Within a mouse model of familial adenomatous polyposis, Sulindac decreases small intestine COX-2 and prostaglandin E (2), thereby inhibiting tumor formation.
In vivo	In colorectal cancer (CRC) cell lines, Sulindac and its metabolites sulindac sulfide and sulindac sulfone inhibit the NF-κB pathway, reducing IKKbeta kinase activity mediated by Sulindac. In HT-29 cells, Sulindac significantly reduces cell growth. Sulindac inhibits cell proliferation across various epithelial and fibroblast tumor cell lines. In CRC cell lines DLD1 and SW480, Sulindac suppresses beta-catenin/TCF-mediated gene transcription and decreases levels of non-phosphorylated beta-catenin.

Solubility Information

Solubility	Ethanol: 9 mg/mL (25.25 mM),Sonication is recommended. DMSO: 50 mg/mL (140.29 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8058 mL	14.0288 mL	28.0576 mL
5 mM	0.5612 mL	2.8058 mL	5.6115 mL
10 mM	0.2806 mL	1.4029 mL	2.8058 mL
50 mM	0.0561 mL	0.2806 mL	0.5612 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Yamamoto Y, et al. J Biol Chem,1999, 274(38), 27307-27314.
Piazza GA, et al. Cancer Res,1995, 55(14), 3110-3116.
Boon EM, et al. Br J Cancer. 2004 Jan 12;90(1):224-9.
Boolbol SK, et al. Cancer Res,1996, 56(11), 2556-2560.
Chiu CH, et al. Cancer Res,1997, 57(19), 4267-4273.
Gong EY, et al. Combined treatment with vitamin C and sulindac synergistically induces p53- and ROS-dependent apoptosis in human colon cancer cells. Toxicol Lett. 2016 Sep 6;258:126-133.
Cha BK, et al. Celecoxib and sulindac inhibit TGF-β1-induced epithelial-mesenchymal transition and suppress lung cancer migration and invasion via downregulation of sirtuin 1. Oncotarget. 2016 Aug 30;7(35):57213-57227.