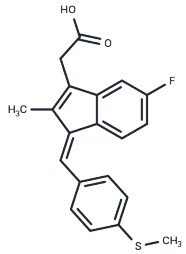
Data Sheet (Cat.No.T13037)

TargetMol

Sulindac sulfide

Chemical Properties



CAS No. : 49627-27-2

Formula: C20H17FO2S

Molecular Weight: 340.41

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Sulindac sulfide (cis-Sulindac sulfide) is a non-steroidal anti-inflammatory compound that has a high affinity for COX-1 and acts as an inhibitor in Ras activation of Raf-1. Sulindac sulfide is a non-competitive inhibitor of gamma-secretase with an IC50 value of 20.2 μM. It is an active metabolite of sulinic acid.
Targets(IC50)	Raf,Gamma-secretase,AChR,Drug Metabolite
In vitro	Treatment with 100 μM of Sulindac sulfide (SSide) induces apoptosis leading to significant reduction in Aβ generation and total protein expression. The IC50 for Aβ42 secretion of SSide is 30.6±2.8 μM. SSide inhibits γ42-secretase activity dose-dependently, with an IC50 of 20.2±2.6 μM. Increasing SSide concentration decreases the slope in the rate vs. enzyme concentration plot, indicating SSide is not an irreversible or pseudo-irreversible inhibitor. After pretreatment of the dialyzed solubilized γ-secretase fraction with SSide and subsequent exposure to CHAPSO buffer without SSide, γ-secretase activity almost fully recovers. This strongly suggests that SSide targets the γ-secretase complex as a reversible inhibitor. [1]
In vivo	Sulindac sulfide also inhibits aldose reductase, blocking NADPH-dependent reduction of glucose to sorbitol, and reducing type 2 diabetic complications.[2] Sulindac sulfide inhibits colorectal cancer growth both in vitro and in vivo.[5]

Solubility Information

Solubility	DMSO: 250 mg/mL (734.41 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.88 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9376 mL	14.6882 mL	29.3763 mL
5 mM	0.5875 mL	2.9376 mL	5.8753 mL
10 mM	0.2938 mL	1.4688 mL	2.9376 mL
50 mM	0.0588 mL	0.2938 mL	0.5875 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Takahashi Y, et al. Sulindac sulfide is a noncompetitive gamma-secretase inhibitor that preferentially reduces Abeta 42 generation. J Biol Chem. 2003;278(20):18664-18670.
Zheng X, et al. The molecular basis for inhibition of sulindac and its metabolites towards human aldose reductase. FEBS Lett. 2012;586(1):55-59.
Warner TD, et al. Nonsteroid drug selectivities for cyclo-oxygenase-1 rather than cyclo-oxygenase-2 are associated with human gastrointestinal toxicity: a full in vitro analysis. Proc Natl Acad Sci U S A. 1999;96(13):7563-7568.
Boolbol SK, et al. Cyclooxygenase-2 overexpression and tumor formation are blocked by sulindac in a murine model of familial adenomatous polyposis. Cancer Res. 1996;56(11):2556-2560.
Williams CS, et al. Sulindac sulfide, but not sulindac sulfone, inhibits colorectal cancer growth. Neoplasia. 1999;1(2):170-176.

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