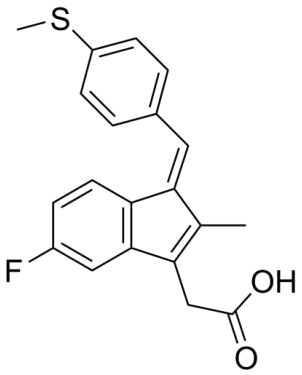
Data Sheet

Product Name:	Sulindac sulfide
Cat. No.:	CS-0013817
CAS No.:	49627-27-2
Molecular Formula:	$C_{20}H_{17}FO_2S$
Molecular Weight:	340.41
Target:	γ-secretase
Pathway:	Neuronal Signaling; Stem Cell/Wnt
Solubility:	DMSO : 50 mg/mL (146.88 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Sulindac sulfide is a noncompetitive **γ-secretase** inhibitor, with an **IC_{50}** of 20.2 μM for $γ_{42}$-secretase activity. IC50 & Target: IC50: 20.2 μM ($γ_{42}$-secretase)[1]. ***In Vitro:*** Treatment with 100 μM of Sulindac sulfide (SSide) causes cell death presumably by inducing apoptosis, resulting in marked decrease in Aβgeneration as well as in total protein expression. The IC_{50} value for Aβ42 secretion of Sulindac sulfide is 30.6±2.8 μM. SSone and naproxen have no effect either on Aβ40 or Aβ42 secretion as well as on Notch cleavage up to 100 μM. It is observed that an inhibition of $γ_{42}$-secretase activity by Sulindac sulfide in a dose-dependent manner. The IC_{50} value of SSide for inhibiting $γ_{42}$-secretase activity in vitro is 20.2±2.6 μM. A decrease is found in slope by the increase of the concentration of SSide in the plot of rate against the enzyme concentration, suggesting that Sulindac sulfide is not an irreversible or pseudo-irreversible inhibitor. Moreover, when the dialyzed solubilizedγ-secretase fraction is pretreated with Sulindac sulfide against CHAPSO buffer without Sulindac sulfide, γ-secretase activity is almost totally recovered. From these data, it is strongly suggested that the genuine molecular target of Sulindac sulfide is the γ-secretase complex and that Sulindac sulfide works as a reversible γ-secretase inhibitor[1].

References:

[1]. Takahashi Y, et al. Sulindac sulfide is a noncompetitive gamma-secretase inhibitor that preferentially reduces Abeta 42 generation. J Biol Chem. 2003 May 16;278(20):18664-70.

CAIndexNames:

1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-[[4-(methylthio)phenyl]methylene]-, (1Z)-

SMILES:

O=C(O)CC(C1=C/2C=CC(F)=C1)=C(C)C2=C\C3=CC=C(SC)C=C3

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