# Sulindac sulfide

**Cat. No.:** HY-B1786

**CAS No.:** 49627-27-2

**Molecular Formula:** $C_{20}H_{17}FO_2S$

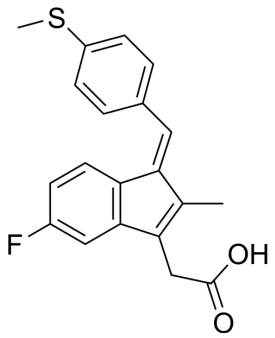
**Molecular Weight:** 340.41

**Target:** γ-secretase; Drug Metabolite

**Pathway:** Neuronal Signaling; Stem Cell/Wnt; Metabolic Enzyme/Protease

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| In solvent | -80°C | 6 months |
| | -20°C | 1 month |




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 50 mg/mL (146.88 mM; Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 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 |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.34 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.34 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Sulindac sulfide is a noncompetitive γ-secretase inhibitor, with an $IC_{50}$ of 20.2 μM for $γ_{42}$-secretase activity.

**$IC_{50}$ & 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].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## 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.



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