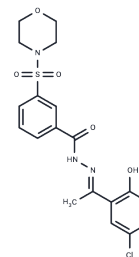


SP2509

## Chemical Properties

CAS No. : 1423715-09-6  
Formula: C<sub>19</sub>H<sub>20</sub>ClN<sub>3</sub>O<sub>5</sub>S  
Molecular Weight: 437.9  
Appearance: no data available  
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



## Biological Description

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                | SP2509 is a specific histone demethylase LSD1 inhibitor(IC <sub>50</sub> =13 nM).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Targets(IC <sub>50</sub> ) | Apoptosis,Histone Demethylase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Kinase Assay               | SP2509 activity assays: Test compounds are diluted to 20 × the desired test concentration in 100% DMSO and 2.5?μL of the diluted drug sampleis added to a black 384-well plate. The LSD1 enzyme stock is diluted 17-fold with assay buffer and 40?μL of the diluted LSD1 enzyme is added to the appropriate wells. Substrate, consisting of horseradish peroxidase, dimethyl K4 peptide corresponding to the first 21 amino acids of the N-terminal tail of histone H3, and 10-acetyl-3,7-dihydroxyphenoxazine is then added to wells. Resorufin is analyzed on an Envision plate reader with an excitation wavelength of 530?nm and an emission wavelength of 595?nm. The activity of SP2509 on the other oxidases is determined by using commercially available kits. The glucose oxidase activity (which also noncovalently binds FAD in an elongate conformation), is determined using the glucose oxidase kit. The MAO assays are performed using the MAO-glo kit with MAO-A and MAO-B. |
| Cell Research              | Cultured AML cells are treated with SP2509 and/or PS for 96?h. At the end of treatment, cells are washed free of the drugs and 500 cells per condition are plated in methylcellulose and incubated at 37°C. Colony formation is measured 7-10 days after plating.(Only for Reference)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Solubility Information

|            |                                                                                                                                                                                                                          |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solubility | DMSO: 36 mg/mL (82.2 mM),<br/>Ethanol: < 1 mg/mL (insoluble or slightly soluble),<br/>H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble),<br/>&lt; 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## A DRUG SCREENING EXPERT

### Preparing Stock Solutions

|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 2.2836 mL | 11.4181 mL | 22.8363 mL |
| 5 mM  | 0.4567 mL | 2.2836 mL  | 4.5673 mL  |
| 10 mM | 0.2284 mL | 1.1418 mL  | 2.2836 mL  |
| 50 mM | 0.0457 mL | 0.2284 mL  | 0.4567 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

Fiskus W, et al. Leukemia. 2014, 28(11), 2155-2164.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

**This product is for Research Use Only. Not for Human or Veterinary or Therapeutic Use**

Tel: 781-999-4286    E\_mail: info@targetmol.com    Address: 36 Washington Street, Wellesley Hills, MA 02481