# SLF1081851 TFA

**Cat. No.:** HY-149004A

**CAS No.:** 2763730-98-7

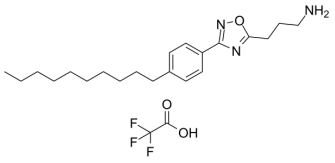
**Molecular Formula:** $C_{23}H_{34}F_3N_3O_3$

**Molecular Weight:** 457.53

**Target:** LPL Receptor

**Pathway:** GPCR/G Protein

**Storage:** Please store the product under the recommended conditions in the Certificate of Analysis.



## BIOLOGICAL ACTIVITY

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| **Description** | SLF1081851 (TFA) is a Spns2 inhibitor, inhibits S1P release ($IC_{50}$=1.93 μM). SLF1081851 (TFA) plays a key role in development and immune system[1][2]. |
| **$IC_{50}$ & Target** | Spns2 (spinster homologue 2)[1] |
| **In Vitro** | Sphingosine 1-phosphate (S1P) is a pleiotropic signaling molecule, and Spns2 exerts the functions to maintain lymph S1P[1].<br>SLF1081851 (TFA) (compound 16d) (0-5 μM; 18-20 h) inhibits S1P release with an $IC_{50}$ value of 1.93 μM in Hela cells[1].<br>SLF1081851 (TFA) (0-30 μM; 20 min) inhibits mSphK1 (recombinant mouse SphK) (10 μM) and mSphK2 (5 μM) in a dose-dependent manner and suggests at least 15-fold selectivity (SphK1 $IC_{50}$≥30 μM; SphK2 $IC_{50}$≈30 μM)[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| **In Vivo** | SLF1081851 (TFA) (20 mg/kg; i.p., 4 h postdose) significantly inhibits circulating lymphocytes and plasma S1P, and recapitulates the genetic phenotype of Spns2 null mice[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

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| Animal Model: | C57BL/6 mice[1] |
| Dosage: | 20 mg/kg |
| Administration: | Intraperitoneal injection; blood was drawn 4 h postdose |
| Result: | Significantly decreased circulating lymphocyte count and plasma S1P concentration. |

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| Animal Model: | Sprague Dawley mice (4-week-old)[1] |
| Dosage: | 10 mg/kg |
| Administration: | Intraperitoneal injection; single dose; measured at 0, 0.5, 1, 2, 4, 6, and 24 h postdose |
| Result: | Reached a maximum concentration of 5 μM in blood at 2 h with drug levels sustained at ≥ 2 μM for at least 24 h, proved a half-life of over 8 h in rats. The appearance of SPNS2-IN-1 in circulation correlated with a maximal decrease in lymphocyte count at 4 h (25% lower compared to time =0). |

## REFERENCES

[1]. Fritzemeier R, et al. Discovery of In Vivo Active Sphingosine-1-phosphate Transporter (Spns2) Inhibitors. J Med Chem. 2022 Jun 9;65(11):7656-7681.

[2]. Lynch Kevin R, et al. Preparation of oxadiazoles as inhibitors of spinster homolog 2 (SPNS2) for use in therapy: World Intellectual Property Organization, WO2022056042[P]. 2022-03-17.



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