MF-438

Cat. No.: HY-15822

CAS No.: 921605-87-0

Molecular Formula: $C_{19}H_{18}F_3N_5OS$

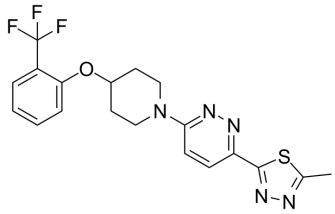
Molecular Weight: 421

Target: Stearoyl-CoA Desaturase (SCD)

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMF : 50 mg/mL (118.76 mM; Need ultrasonic)

DMSO : 25 mg/mL (59.38 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3753 mL	11.8765 mL	23.7530 mL
	5 mM	0.4751 mL	2.3753 mL	4.7506 mL
	10 mM	0.2375 mL	1.1876 mL	2.3753 mL

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

In Vivo

1. Add each solvent one by one: 10% DMF >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 4.55 mg/mL (10.81 mM); Clear solution
2. Add each solvent one by one: 10% DMF >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.94 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.83 mg/mL (1.97 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.83 mg/mL (1.97 mM); Clear solution
5. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.83 mg/mL (1.97 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MF-438 is a potent and orally bioavailable stearoyl-CoA desaturase 1 (SCD1) inhibitor with an IC_{50} of 2.3 nM for rSCD1[1].

IC_{50} & Target	EC_{50}: 2.3 nM (rSCD1)[1]
In Vivo	MF-438 exhibits an ED_{50} between 1 and 3 mg/kg in a mouse model[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cancer Discov. 2023 Apr 3;CD-22-0411.
- EBioMedicine. 2022 Feb 11;77:103872.

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REFERENCES

[1]. Léger S, et al. Synthesis and biological activity of a potent and orally bioavailable SCD inhibitor (MF-438). Bioorg Med Chem Lett. 2010 Jan 15;20(2):499-502.

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