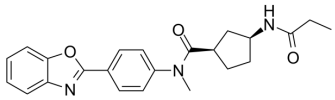
BI 99179

Cat. No.:	HY-16100
CAS No.:	1291779-76-4
Molecular Formula:	$C_{23}H_{25}N_3O_3$
Molecular Weight:	391.46
Target:	Fatty Acid Synthase (FASN)
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (319.32 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5545 mL	12.7727 mL	25.5454 mL
5 mM	0.5109 mL	2.5545 mL	5.1091 mL
10 mM	0.2555 mL	1.2773 mL	2.5545 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: ≥ 2.08 mg/mL (5.31 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.31 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BI 99179 is a potent and selective type I fatty acid synthase (FAS) inhibitor with an IC_{50} of 79 nM. BI 99179 is a tool compound suitable for the in vivo validation of FAS as a target for lipid metabolism related diseases. BI 99179 exhibits significant exposure (both peripheral and central) upon oral administration in rats[1][2].

IC_{50} & Target

IC50: 79 nM (FASN)[1]

In Vitro

BI 99179 is potent in the mouse hypothalamic N-42 cell with an IC_{50} of 0.6 μM. BI 99179 shows no significant LDH release in

	the cytotoxicity assay up to 30 μM[1]. BI 99179 (BI-99179; 1, 2, and 4 μM) shows antiproliferative efficacy in human glioma GAMG cells[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Proliferation Assay[2]

Cell Line:	Human glioma GAMG cells
Concentration:	1, 2, 4 μM
Incubation Time:	96 to 120 hours
Result:	The optimal palmitate concentration for GAMG cell line was 4 μM.

In Vivo	BI 99179 has a super pharmacokinetic profile in male Han/Wistar rats (oral application of 4 mg/kg) with half life ($t_{1/2}$) of 3.0 h [1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kley JT, et al. Discovery of BI 99179, a potent and selective inhibitor of type I fatty acid synthase with central exposure.Bioorg Med Chem Lett. 2011 Oct 1;21(19):5924-7.

[2]. Prosanta K Singha, et al. Evaluation of FASN inhibitors by a versatile toolkit reveals differences in pharmacology between human and rodent FASN preparations and in antiproliferative efficacy in vitro vs. in situ in human cancer cells. Eur J Pharm Sci. 2020 Apr 7;149:105321.

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