# BI 99179

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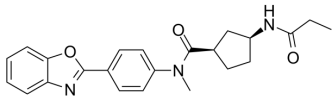
| **Cat. No.:** | HY-16100 |
| **CAS No.:** | 1291779-76-4 |
| **Molecular Formula:** | $C_{23}H_{25}N_3O_3$ |
| **Molecular Weight:** | 391.46 |
| **Target:** | Fatty Acid Synthase (FASN) |
| **Pathway:** | Metabolic Enzyme/Protease |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent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

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

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| 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. |

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| **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].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## CUSTOMER VALIDATION

- Aging (Albany NY). 2021 Sep 7;13(17):21470-21482.

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## 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. 20



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