# Cbz-B3A

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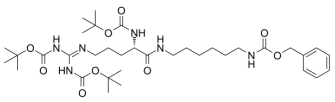
|---|---|
| **Cat. No.:** | HY-114267 |
| **CAS No.:** | 1884710-81-9 |
| **Molecular Formula:** | $C_{35}H_{58}N_6O_9$ |
| **Molecular Weight:** | 706.87 |
| **Target:** | mTOR |
| **Pathway:** | PI3K/Akt/mTOR |
| **Storage:** | Powder -20°C 3 years<br>In solvent -80°C 6 months<br>-20°C 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 20 mg/mL (28.29 mM; Need ultrasonic and warming)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 1.4147 mL | 7.0734 mL | 14.1469 mL |
| | 5 mM | 0.2829 mL | 1.4147 mL | 2.8294 mL |
| | 10 mM | 0.1415 mL | 0.7073 mL | 1.4147 mL |

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

## BIOLOGICAL ACTIVITY

**Description**

Cbz-B3A is a potent and selective inhibitor of mTORC1 signaling that appear to bind to ubiquilins 1, 2, and 4, and Cbz-B3A inhibits the phosphorylation of eIF4E-binding protein 1 (4EBP1).

**$IC_{50}$ & Target**

mTORC1 signaling[1].

**In Vitro**

Cbz-B3A slows cellular growth of some human leukemia cell lines, but is not cytotoxic.
Cbz-B3A has a larger effect on the phosphorylation of 4EBP1 than $p70^{S6k}$ compared to repamycin. Cbz-B3A inhibits mTOR through Ubiquilins.
Cbz-B3A decreases the incorporation of [$^{35}$S]methionine/cysteine into protein in a dose-dependent manner, with maximal inhibition of 68% observed at 10 μM, and an $EC_{50}$ of ~3 μM.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Coffey RT, et al. Ubiquilin-mediated Small Molecule Inhibition of Mammalian Target of Rapamycin Complex 1 (mTORC1) Signaling. J Biol Chem. 2016 Mar 4;291(10):5221-33.



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