# Bempedoic acid-$d_4$

**Cat. No.:** HY-12357S2

**CAS No.:** 2408131-70-2

**Molecular Formula:** $C_{19}H_{32}D_4O_5$

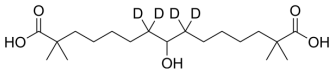
**Molecular Weight:** 348.51

**Target:** ATP Citrate Lyase; AMPK

**Pathway:** Metabolic Enzyme/Protease; Epigenetics; PI3K/Akt/mTOR

**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 : 50 mg/mL (143.47 mM; Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.8694 mL | 14.3468 mL | 28.6936 mL |
| | 5 mM | 0.5739 mL | 2.8694 mL | 5.7387 mL |
| | 10 mM | 0.2869 mL | 1.4347 mL | 2.8694 mL |

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

## BIOLOGICAL ACTIVITY

**Description**

Bempedoic acid-$d_4$ is the deuterium labeled Bempedoic acid. Bempedoic acid (ETC-1002) is an ATP-citrate lyase (ACL) inhibitor. Bempedoic acid (ETC-1002) activates AMPK[1][2].

**In Vitro**

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Pinkosky SL, et al. AMP-activated protein kinase and ATP-citrate lyase are two distinct molecular targets for ETC-1002, a novel small molecule regulator of lipid and carbohydrate metabolism. J Lipid Res. 2013 Jan;54(1):134-51.

[2]. Filippov S, et al. ETC-1002 regulates immune response, leukocyte homing, and adipose tissue inflammation via LKB1-dependent activation of macrophage AMPK. J

Lipid Res. 2013 Aug;54(8):2095-108.

[3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.



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