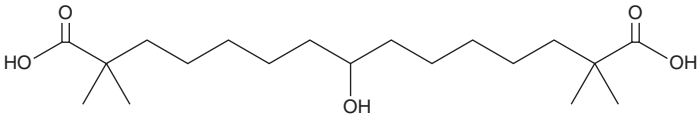
PRODUCT INFORMATION

ETC-1002

Item No. 26409

CAS Registry No.:	738606-46-7
Formal Name:	8-hydroxy-2,2,14,14-tetramethyl-pentadecanedioic acid
Synonyms:	Bempedoic Acid, ESP-55016
MF:	$C_{19}H_{36}O_5$
FW:	344.5
Purity:	≥95%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

ETC-1002 is supplied as a crystalline solid. A stock solution may be made by dissolving the ETC-1002 in the solvent of choice, which should be purged with an inert gas. ETC-1002 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ETC-1002 in ethanol is approximately 2 mg/ml and approximately 20 mg/ml in DMSO and DMF.

ETC-1002 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ETC-1002 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ETC-1002 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ETC-1002 is a prodrug form of ETC-1002-CoA.[1] ETC-1002 is conjugated to coenzyme A (CoA) by very long-chain acyl-CoA synthetase-1 (ACSVL1) to form ETC-1002-CoA, which inhibits ATP citrate lyase (K_i = 2 µM) and activates AMP-activated protein kinase (AMPK). ETC-1002 suppresses total lipid synthesis in wild-type and AMPKβ1 knockout primary murine hepatocytes. *In vivo*, ETC-1002 (30 mg/kg) prevents increases in hepatic cholesterol and reduces the size of aortic atherosclerotic lesions induced by a high-fat high-cholesterol diet in *Apoe*$^{-/-}$/*Ampkβ1*$^{-/-}$ (DKO) mice.

Reference

1. Pinkosky, S.L., Newton, R.S., Day, E.A., *et al.* Liver-specific ATP-citrate lyase inhibition by bempedoic acid decreases LDL-C and attenuates atherosclerosis. *Nat. Commun.* **7:13457**, (2016).

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