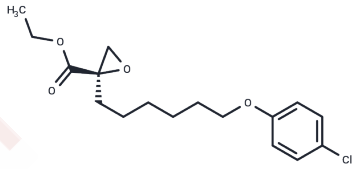
Data Sheet (Cat.No.T4535L)

TargetMol

Etomoxir

Chemical Properties



CAS No. : 124083-20-1

Formula: C17H23ClO4

Molecular Weight: 326.82

Appearance: Solid

Storage: store at low temperature,keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Etomoxir is an irreversible inhibitor of carnitine palmitoyltransferase 1a (CPT-1a) (IC50=5-20 nM). Etomoxir inhibits fatty acid oxidation by inhibiting CPT-1a, inhibits palmitate oxidation, has an inhibitory effect on adenine nucleotide translocase, and can inhibit macrophage polarization by disrupting CoA homeostasis.
Targets(IC50)	Apoptosis,Antioxidant,CPT
In vitro	**METHODS**: A2780/PTX cells were treated with Etomoxir (1, 10, 100, 1000, 10000, 100000 nM) and paclitaxel (1, 10, 100, 1000, 10000, 100000 nM) for 48 hours, and the growth inhibition of the cells was detected by the CCK-8 method. **RESULTS**: The IC50 value of Etomoxir decreased from 1589.5 ± 62.5 nM to 817.4 ± 79.7 nM. [1]
In vivo	**METHODS**: To study the inhibition of cardiac CPT-I activity by Etomoxir, rats were injected with Etomoxir daily for 8 consecutive days at a dose of 20 mg/kg. **RESULTS**: Rats treated with Etomoxir showed a 44% reduction in cardiac CPT-I activity. **METHODS**: To study the effects of Etomoxir on blood glucose levels, weight gain, hind limb muscle mass, heart mass and liver mass, Lewis rats were treated with 20 mg/kgEtomoxir for 8 days. **RESULTS**: Treating Lewis rats with Etomoxir for 8 days did not change the blood glucose level, did not affect general growth characteristics such as weight gain, nor did it affect the muscle mass of the hind limbs. However, both the heart mass and liver mass increased significantly by 11%. [2]

Solubility Information

Solubility	0.5% CMC-Na: 12.5 mg/mL (38.25 mM),Suspension. DMSO: 250 mg/mL (764.95 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0598 mL	15.2989 mL	30.5979 mL
5 mM	0.612 mL	3.0598 mL	6.1196 mL
10 mM	0.306 mL	1.5299 mL	3.0598 mL
50 mM	0.0612 mL	0.306 mL	0.612 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Ma Q, et al. Resensitizing Paclitaxel-Resistant Ovarian Cancer via Targeting Lipid Metabolism Key Enzymes CPT1A, SCD and FASN. Int J Mol Sci. 2023 Nov 19;24(22):16503.
Nian Z, Dou Y, Shen Y, et al.Interleukin-34-orchestrated tumor-associated macrophage reprogramming is required for tumor immune escape driven by p53 inactivation.Immunity.2024
Luiken JJ, et al. Etomoxir-induced partial carnitine palmitoyltransferase-I (CPT-I) inhibition in vivo does not alter cardiac long-chain fatty acid uptake and oxidation rates. Biochem J. 2009 Apr 15;419(2):447-55.
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O'Connor RS, et al. The CPT1a inhibitor, etomoxir induces severe oxidative stress at commonly used concentrations. Sci Rep. 2018 Apr 19;8(1):6289.