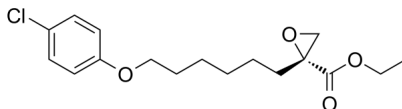


## Certificate of Analysis

Catalog Number	BP22512
Product Name	Etomoxir

## Physical and Chemical Properties

CAS No.	124083-20-1
Chemical Formula	C <sub>17</sub> H <sub>23</sub> ClO <sub>4</sub>
Molecular Weight	326.82
Solubility	DMSO: 100 mg/mL (305.98 mM, Need ultrasonic and warming and heat to 60°C)
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

## Product Information

Description	Etomoxir is an irreversible inhibitor of carnitine palmitoyltransferase 1a (CPT-1a), inhibits fatty acid oxidation (FAO) through CPT-1a and inhibits palmitate $\beta$ -oxidation in human, rat and guinea pig.
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In vitro	<p>Etomoxir binds irreversibly to the catalytic site of CPT-1 inhibiting its activity, but also upregulates fatty acid oxidation enzymes. Etomoxir is developed as an inhibitor of the mitochondrial carnitine palmitoyltransferase-1 (CPT-1) located on the outer mitochondrial membrane. Etomoxir, in the liver can act as peroxisomal proliferator, increasing DNA synthesis and liver growth. Thus, etomoxir, in addition of being a CPT1 inhibitor could be considered as a PPARAlpha agonist. Etomoxir is a member of the oxirane carboxylic acid carnitine palmitoyl transferase I inhibitors and has been suggested as a therapeutic agent for the treatment of heart failure. Acute Etomoxir treatment irreversibly inhibits the activity of carnitine palmitoyltransferase I. As a result, fatty acid import into the mitochondria and <math>\beta</math>-oxidation is reduced, whereas cytosolic fatty acid accumulates and glucose oxidation is elevated. Prolonged incubation (24 h) with Etomoxir produces diverse effects on the expression of several metabolic enzyme.</p>
In vivo	<p>Etomoxir is an inhibitor of free fatty acid (FFA) oxidation-related key enzyme CPT1. P53 interacts directly with Bax, which is inhibited by Etomoxir, further confirming the direct interaction of P53 and Bax, and the involvement of FAO-mediated mitochondrial ROS generation in db/db mice. Rats are injected daily with Etomoxir, a specific CPT-I inhibitor, for 8 days at 20 mg/kg of body mass. Etomoxir-treated rats display a 44% reduced cardiac CPT-I activity. The treatment of Lewis rats for 8 days with 20 mg/kg Etomoxir does not alter blood glucose, which is in line with comparable etomoxir-feeding studies. Similarly, Etomoxir feeding does not affect general growth characteristics such as gain in body mass, nor does it affect hindlimb muscle mass. However, heart mass and liver mass are both significantly increased by 11% in Etomoxir-treated rats.</p>

## Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	<p>Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.</p>

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