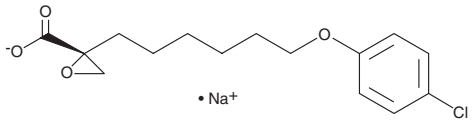
PRODUCT INFORMATION

(+)-Etomoxir (sodium salt)

Item No. 11969

CAS Registry No.: 828934-41-4
Formal Name: (2R)-2-[6-(4-chlorophenoxy)hexyl]-2-oxiranecarboxylic acid, monosodium salt
Synonym: (R)-(+)-Etomoxir
MF: $C_{15}H_{18}ClO_4 \bullet Na$
FW: 320.7
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 282 nm
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

(+)-Etomoxir (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the (+)-etomoxir (sodium salt) in the solvent of choice, which should be purged with an inert gas. (+)-Etomoxir (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (+)-etomoxir (sodium salt) in these solvents is approximately 6, 9, and 10 mg/ml, respectively. It is also soluble in water. The solubility of (+)-etomoxir (sodium salt) in water is approximately 10 mg/ml (ultrasonic) and 16 mg/ml (ultrasonic at 36°C). We do not recommend storing the aqueous solution for more than one day.

Description

(+)-Etomoxir is an irreversible inhibitor of carnitine palmitoyltransferase 1 (CPT1), an enzyme that combines fatty acyl-CoAs with carnitine for transport into the mitochondria for β-oxidation.[1,2] It inhibits fatty acid oxidation in hepatocytes *in vitro* (IC_{50}s = 0.1, 1, and 10 µM for human, guinea pig, and rat hepatocytes, respectively), and it shifts the carbon source for the TCA cycle to glucose.[3,4] It also inhibits cholesterol synthesis from acetate in hepatocytes upstream of mevalonate.[5] (+)-Etomoxir also decreases ATP-linked and uncoupled oxygen consumption in C2C12 myotubes when used in combination with BPTES (Item No. 19284) or UK 5099 (Item No. 16980).[6]

References

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2. Lopaschuk, G.D., Wall, S.R., Olley, P.M., *et al. Circ. Res.* **63(6)**, 1036-1043 (1988).
3. Agius, L., Peak, M., and Sherratt, H.S.A. *Biochem. Pharmacol.* **42(9)**, 1711-1715 (1991).
4. Abdel-aleem, S., Li, X., Anstadt, M.P., *et al. Horm. Metab. Res.* **26(2)**, 88-91 (1994).
5. Agius, L., Meredith, E.J., and Sherratt, H.S.A. *Biochem. Pharmacol.* **42(9)**, 1717-1720 (1991).
6. Vacanti, N.M., Divakaruni, A.S., Green, C.R., *et al. Mol. Cell* **56(3)**, 425-435 (2014).

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