

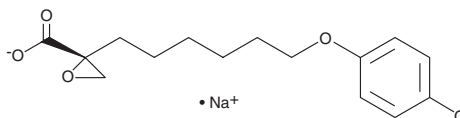
PRODUCT INFORMATION



(+)-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: C₁₅H₁₈ClO₄ • Na
FW: 320.7
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 282 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 2 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. (+)-Etomoxir (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (+)-etomoxir (sodium salt) in these solvents is approximately 0.1, 1, and 10 mg/ml, respectively.

(+)-Etomoxir (sodium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (+)-etomoxir (sodium salt) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (+)-Etomoxir (sodium salt) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. 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* (IC₅₀s = 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

1. Portilla, D., Dai, G., Peters, J.M., *et al.* *Am. J. Physiol. Renal. Physiol.* **278(4)**, F667-F675 (2000).
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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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