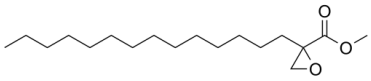
Data Sheet

Product Name:	McN3716
Cat. No.:	CS-7213
CAS No.:	69207-52-9
Molecular Formula:	C18H34O3
Molecular Weight:	298.46
Target:	Others
Pathway:	Others
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

McN3716 is a carnitine palmitoyltransferase I (**CPT-1**) inhibitor. IC50 & Target: Carnitine palmitoyltransferase I (CPT-1)[1] **In Vivo:** Inhibition of brain mitochondrial β-oxidation by McN3716 (Methyl palmoxirate, MEP) significantly reduces the levels of all measured HETE and epoxytrienoic acids (EET), nonenzymatic auto-oxidative metabolites of ARA, by 23% to 44% and 32% to 50% compared with vehicle-injected rats, respectively, except for 15-HETE which was unaffected. There is a significant 34% reduction in the level of 6-keto-$PGF_{1\alpha}$, a byproduct of PGI_2 (prostacyclin) in McN3716-treated rats. Similarly, the brain level of hydroxyeicosapentaenoic acids, nonenzymatic auto-oxidative metabolites of EPA, is reduced by 35% to 76% upon McN3716 treatment relative to vehicle[1].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: [1]Rats[1]

Male Sprague Dawley rats are used. The rats receive ad libitum access to standard chow and water. At 15 weeks of age, six rats were subjected to either high-energy, head-focused microwave irradiation or CO_2 asphyxiation. A separate group of 11 rats were implanted with a tail vein catheter (intravenous catheter 24 gauge/0.75 inch) and received either an intravenous injection of vehicle or 10 mg/kg of McN3716. Fifteen minutes after injection, rats were rapidly euthanized by high-energy, head-focused microwave irradiation (13.5 kW for 1.6 seconds) to avert ischemia for accurate quantification of in vivo basal levels of nonenzymatic auto-oxidative PUFA metabolites and enzymatically derived metabolites. Previously, we reported that this method reduced β-oxidation of fatty acid by 23% to 74%. McN3716 (Methyl palmoxirate, MEP) readily crosses the blood–brain barrier with a plasma half-life of 0.6 minute in the rat. The brain was excised and stored at -80°C for lipidomics profiling.

References:

[1]. Chen CT, et al. Inhibiting mitochondrial β-oxidation selectively reduces levels of nonenzymatic oxidative polyunsaturated fatty acid metabolites in the brain. J Cereb Blood Flow Metab. 2014 Mar;34(3):376-9.

CAIndexNames:

2-Oxiranecarboxylic acid, 2-tetradecyl-, methyl ester

SMILES:

O=C(C1(CCCCCCCCCCCCC)OC1)OC

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA