

PRODUCT INFORMATION



cis-9,10-Epoxyoctadecanoic Acid

Item No. 36442

CAS Registry No.: 24560-98-3
Formal Name: (2R,3S)-*rel*-3-octyl-2-oxiraneoctanoic acid
Synonyms: *cis*-EODA,
cis-9,10-Epoxysearic Acid
MF: C₁₈H₃₄O₃
FW: 298.5
Purity: ≥95%
Supplied as: A 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

cis-9,10-Epoxyoctadecanoic acid is supplied as a solid. A stock solution may be made by dissolving the *cis*-9,10-epoxyoctadecanoic acid in the solvent of choice, which should be purged with an inert gas. *cis*-9,10-Epoxyoctadecanoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of *cis*-9,10-epoxyoctadecanoic acid in ethanol and DMF is approximately 16 mg/ml and approximately 14 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of *cis*-9,10-epoxyoctadecanoic acid can be prepared by directly dissolving the solid in aqueous buffers. The solubility of *cis*-9,10-epoxyoctadecanoic acid in PBS (pH 7.2) is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

cis-9,10-Epoxyoctadecanoic acid is an epoxy fatty acid. It is an oxidation product of oleic acid formed by the cytochrome P450 (CYP) isoforms CYP2C and CYP3A.¹ It has been found in the fungus *P. carinii* isolated from the lungs of rats in a model of *P. carinii*-induced pneumonia.² *cis*-9,10-Epoxyoctadecanoic acid has also been found in human plasma, and plasma levels are decreased in patients with impaired liver function.¹

References

1. Thum, T., Batkai, S., Malinski, P.G., *et al.* Measurement and diagnostic use of hepatic cytochrome P450 metabolism of oleic acid in liver disease. *Liver Int.* **30**(8), 1181-1188 (2010).
2. Kaneshiro, E.S., Ellis, J.E., Guo, Z., *et al.* Characterizations of neutral lipid fatty acids and *cis*-9,10-epoxy octadecanoic acid in *Pneumocystis carinii carinii*. *Infect. Immun.* **64**(10), 4105-4114 (1996).

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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