

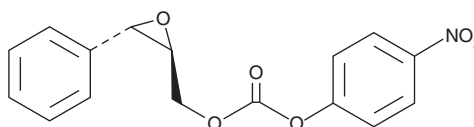
PRODUCT INFORMATION



S-NEPC

Item No. 10008609

CAS Registry No.: 147349-28-8
Formal Name: 4-nitrophenyl-2S,3S-epoxy-3-phenylpropyl carbonate
MF: C₁₆H₁₃NO₆
FW: 315.3
Purity: ≥98%
UV/Vis.: λ_{max}: 213, 266 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

S-NEPC is supplied as a crystalline solid. A stock solution may be made by dissolving the S-NEPC in the solvent of choice, which should be purged with an inert gas. S-NEPC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of S-NEPC in ethanol is approximately 2 mg/ml and approximately 30 mg/ml in DMSO and DMF.

S-NEPC is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, S-NEPC should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. S-NEPC has a solubility of approximately 0.15 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cytochrome P450 metabolites of arachidonic acid, such as 11(12)-EpETrE and 14(15)-EpETrE have been identified as endothelium derived hyperpolarizing factors with vasodilator activity.¹ Soluble epoxide hydrolase (sEH) catalyzes the conversion of EpETrEs to the corresponding DiHETrEs thereby diminishing their activity.² Inhibitors of sEH may therefore have clinical utility for treating hypertension and systemic inflammation.^{3,4} S-NEPC is a colorimetric substrate used to measure sEH activity. It also is a substrate for Glutathione S-transferase, microsomal epoxide hydrolase and porcine liver carboxylesterase. Hydrolysis of S-NEPC by sEH yields 4-nitrophenol which can be quantified spectrophotometrically at 405 nm. S-NEPC is adaptable for use in 96-well microwell plate readers.

References

1. Fleming, I. Cytochrome P450 epoxygenases as EDHF synthase(s). *Pharmacol. Res.* **49(6)**, 525-533 (2004).
2. Morisseau, C., Goodrow, M.H., Newman, J.W., et al. Structural refinement of inhibitors of urea-based soluble epoxide hydrolases. *Biochem. Pharmacol.* **63(9)**, 1599-1608 (2002).
3. Imig, J.D., Zhao, X., Zaharis, C.Z., et al. An orally active epoxide hydrolase inhibitor lowers blood pressure and provides renal protection in salt-sensitive hypertension. *Hypertension* **46(2)**, 975-981 (2005).
4. Schmelzer, K.R., Kubala, L., Newman, J.W., et al. Soluble epoxide hydrolase is a therapeutic target for acute inflammation. *Proc. Natl. Acad. Sci. USA* **102(28)**, 9772-9777 (2005).

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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