



Product Information

6-(2-Propargyloxyphenyl)hexanoic acid

Product Number **P 9114**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS#: 206052-01-9

Synonym: PPOH; 2-(2-propynyloxy)benzenehexanoic acid

Product Description

Molecular Formula: $\text{C}_{15}\text{H}_{18}\text{O}_3$

Molecular Weight: 246.3

PPOH is a synthetic, acetylenic fatty acid and a selective inhibitor of arachidonate epoxygenation reactions catalyzed by certain microsomal cytochrome P450 (CYP) enzymes.^{1,2} PPOH inhibits the reaction of epoxide formation (IC_{50} of $90\text{ }\mu\text{M}$) at arachidonate positions 11 and 12 by CYP4A2 and CYP4A3 isozymes. PPOH does not inhibit the ω -hydroxylation reaction of CYP4A1 leading to the formation of 20-HETE.¹ Arachidonate metabolism studies using inhibitors such as PPOH may be useful in elucidating the role of metabolites in regulating renal function and hypertension.¹

Precautions and Disclaimer

This product is for laboratory research only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

PPOH is soluble in the following organic solvents: ethanol, DMSO, and N,N-dimethylformamide (DMF). It is at least soluble to 50 mg/ml in each solvent. The organic solvents should first be purged with an inert gas such as argon before preparation of the stock solutions to minimize any possible oxidation of the unsaturated PPOH. Stock solutions will be stable for at least one year as aliquots stored at $-20\text{ }^{\circ}\text{C}$ and under a layer of argon or dry nitrogen.

The stock solution should be further diluted into aqueous buffers or isotonic saline (ensure that the residual amount of organic solvent is not causing physiological effects at low concentrations of the organic solvent) for biological experiments. Alternatively, if an organic solvent-free aqueous solution is desired, directly dissolve the crystalline PPOH in aqueous buffers. The solubility of PPOH is at least 0.5 mg/ml in PBS buffer, pH 7.2. Do not store aqueous solutions for more than one day.

Storage/Stability

The product is shipped on wet ice and should be stored at $-20\text{ }^{\circ}\text{C}$. Avoid frost-free freezers. The product as supplied is stable for at least 1 year.

References

1. Wang M.-H., et al., Cytochrome P450-derived arachidonic acid metabolism in the rat kidney: characterization of selective inhibitors. *J. Pharm. Exp. Ther.* **284**, 966-73 (1998).
2. Imig, J.D., et al., Contribution of cytochrome P450 epoxygenase and hydroxylase pathways to afferent arteriolar autoregulatory responsiveness. *Br. J. Pharmacol.*, **127**, 1399-1405 (1999).
3. Capdevila, J.H., et al., Cytochrome P-450 enzyme-specific control of the regio- and enantiofacial selectivity of the microsomal arachidonic acid epoxygenase. *J. Biol. Chem.*, **265**, 10865-71 (1990).
4. Sacerdoti, D., et al., Renal cytochrome P-450-dependent metabolism on arachidonic acid in spontaneously hypertensive rats. *Biochem. Pharmacol.*, **37**, 521-27 (1988).
5. Fitzpatrick, F.A. and Murphy, R.C., Cytochrome P-450 metabolism of arachidonic acid: formation and biological actions of "epoxygenase"-derived eicosanoids. *Pharmacol. Rev.*, **40**, 229-41 (1988).

RLC/ARO 12/01

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.