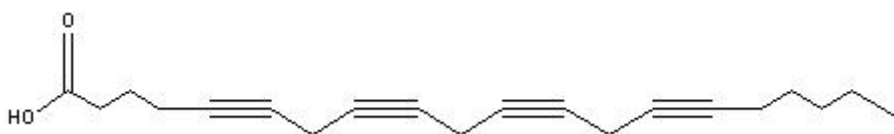


TECHNICAL INFORMATION

Catalog Number: 151508

Eicosatetraynoic Acid

Structure:



Formula: C₂₀H₂₄O₂

Formula Weight: 296.4

CAS # : 1191-85-1

Synonym: ETYA; 5,8,11,14-Eicosatetraynoic acid; Octadecydroarachidonic acid

Note: Air and light sensitive

Solubility:

Before use, a stock solution should be prepared by dissolving the ETYA in an organic solvent such as ethanol, methanol, acetone, DMSO, or acetonitrile; ethanol is most commonly used. The solubility of ETYA in these solvents is about 100 mg/ml. This stock solution will be stable for at least 6 months at -20°C.

Just prior to use, make dilutions of the stock solution into aqueous buffer or isotonic saline to bring the ETYA to the desired concentration. Ensure that the residual amount of organic solvent is insignificant since organic solvents may have physiologic effects at low concentrations. A control using the solvent in the absence of the ETYA will address this potential variable. We do not recommend storing the aqueous solution for more than one day.

It is difficult to obtain aqueous solutions of ETYA directly. However, an organic solvent free solution of ETYA can be prepared using concentrated basic buffers (pH > 8.0 and ionic strength ≥ 0.1 M). Add 400 ul of cold buffer (-0°C) per mg of ETYA and agitate vigorously and/or ultrasonicate. Again, we do not recommend storing aqueous solutions for more than one day.

Description: Lipoxygenase and Cyclooxygenase inhibitor. Inhibits arachidonic acid uptake.¹ Inhibits arachidonic acid specific and nonspecific acyl-CoA synthetase.¹ Inhibits cyclooxygenase (ID₅₀ = 8 uM) and all lipoxygenases (ID₅₀=10, 0.3 and 0.2 uM for 5-, 12-, and 15-LO respectively)^{2,4} in whole cells. Inhibits PLA₂⁵ and cytochrome p-450.⁶ Stimulates luteinizing hormone release from cultured pituitary cells.⁷

References:

- A.S. Taylor, et. al., *Prostaglandins*, **v. 29**, 449 (1985).
- Salari, H., et. al., *Prostagland. Leukotrienes Med.*, **v. 13**, 53 (1984).
- Bokoch, G.M., et. al., *J. Biol. Chem.*, **v. 256**, 4156 (1982).
- Tobias, L.D., et. al., *Lipids*, **v. 14**, 181 (1979).
- Chi, E.Y., et. al., *Lab. Invest.*, **v. 47**, 579 (1982).
- Falck, J.R., et. al., *Biochem. Biophys. Res. Commun.*, **v. 114**, 743 (1983).
- Conn, P.M., et. al., *Prostaglandins*, **v. 19**, 873 (1980).
- Taylor, A.S., et. al., *Prostaglandins*, **v. 29**, 449 (1985).