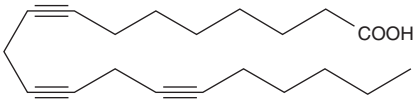
PRODUCT INFORMATION

8,11,14-Eicosatriynoic Acid

Item No. 10007900

CAS Registry No.: 34262-64-1
Formal Name: 8,11,14-eicosatriynoic acid
Synonyms: 8,11,14-ETI, FA 20:6
MF: $C_{20}H_{28}O_2$
FW: 300.4
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

8,11,14-Eicosatriynoic acid (8,11,14-ETI) is supplied as a crystalline solid. A stock solution may be made by dissolving the 8,11,14-ETI in the solvent of choice, which should be purged with an inert gas. 8,11,14-ETI is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 8,11,14-ETI in these solvents is approximately 100 mg/ml.

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 8,11,14-ETI can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 8,11,14-ETI in PBS (pH 7.2) is approximately 0.15 mg/ml. For greater aqueous solubility, 8,11,14-ETI can be directly dissolved in 0.15 M Tris-HCl (pH 8.5) (solubility of approximately 1 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

Description

8,11,14-ETI is an inhibitor of prostaglandin and leukotriene biosynthesis as well as arachidonic acid induced platelet aggregation.[1] It inhibits cyclooxygenase (IC_{50} = 14 µM), human 12-LO (IC_{50} = 0.46 µM), 5-LO (IC_{50} = 25 µM) and the actions of slow-reacting substance of anaphylaxis (SRS-A) (IC_{50} = 10 µM).[2,3]

References

1. Goetz, J.M., Sprecher, H., Cornwell, D.G., *et al.* Inhibition of prostaglandin biosynthesis by triynoic acids. *Prostaglandins* **12(2)**, 187-192 (1976).
2. Sun, F.F., McGuire, J.C., Morton, D.R., *et al.* Inhibition of platelet arachidonic acid 12-lipoxygenase by acetylenic acid compounds. *Prostaglandins* **21(2)**, 333-343 (1981).
3. Jakschik, B.A., DiSantis, D.M., Sankarappa, S.K. , *et al.* Modulation of leukotriene formation by various acetylenic acids, *in* Leukotrienes and Other Lipoxygenase Products. Samuelsson, B. and Paoletti, R., editors, Raven Press, New York, 127-135 (1982).

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