Eicosapentaenoic Acid

Item No. 90110

CAS Registry No.: 10417-94-4
Formal Name: 5Z,8Z,11Z,14Z,17Z-eicosapentaenoic acid
Synonyms: EPA, Timnodonic Acid
MF: C₂₀H₃₀O₂
FW: 302.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol
Misc: Oxygen and light sensitive

Laboratory Procedures

For long term storage, we suggest that eicosapentaenoic acid (EPA) be stored as supplied at -20°C. It should be stable for at least one year.

EPA is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of EPA 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 solutions of EPA can be prepared using concentrated basic buffers (pH > 8.0 and ionic strength ≥ 0.1 M). Add 400 µl of cold buffer (0°C) per mg of EPA and mix vigorously on a vortex mixer until all the EPA is dissolved. Store aqueous solutions of EPA on ice and use within 12 hours of preparation. Although the aqueous solutions of EPA may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

EPA is a ω-3 fatty acid abundantly available in marine organisms. It is oxygenated by COX-1 and COX-2 at rates of about 5% and 30%, respectively, compared to arachidonic acid. EPA has been shown to offer protection against coronary heart disease, thrombosis, ischemic brain injury, scaly dermatitis, and some inflammatory diseases.

References

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/90110

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to your email at the time of delivery.