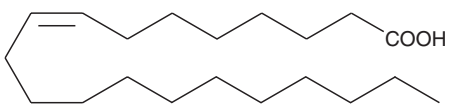
PRODUCT INFORMATION

8(Z)-Eicosenoic Acid

Item No. 22579

CAS Registry No.: 76261-96-6
Formal Name: 8Z-eicosenoic acid
Synonyms: *cis*-8-eicosenoic acid, FA 20:1
MF: $C_{20}H_{38}O_2$
FW: 310.5
Purity: ≥98%
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

8(Z)-Eicosenoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 8(Z)-eicosenoic acid in the solvent of choice, which should be purged with an inert gas. 8(Z)-Eicosenoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 8(Z)-eicosenoic acid in these solvents is approximately 10 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(Z)-eicosenoic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 8(Z)-eicosenoic acid in PBS, pH 7.2, is approximately 0.15 mg/ml.

For maximum solubility in aqueous buffers, the ethanolic solution of 8(Z)-eicosenoic acid should be diluted with the aqueous buffer of choice. 8(Z)-Eicosenoic acid has a solubility of approximately 1 mg/ml in a 0.15 M solution of Tris-HCl, pH 8.5, using this method. We do not recommend storing the aqueous solution for more than one day.

Description

8(Z)-Eicosenoic acid is a *cis*-unsaturated free fatty acid with a 20-carbon chain.[1,2] It potentiates acetylcholine (ACh) receptor channel currents without depression and enhances PCK_ε phosphorylation of a substrate peptide in *Xenopus* oocytes.[1] 8(Z)-Eicosenoic acid constitutes 6% of the fatty acid pool in seed oil isolated from *B. collina*.[2]

References

1. Yaguchi, T., Yamamoto, S., Nagata, T., *et al.* Effects of *cis*-unsaturated free fatty acids on PKC-ε activation and nicotinic ACh receptor responses. *Brain Res. Mol. Brain Res.* **133(2)**, 320-324 (2005).
2. Vickery, J.R. The fatty acid composition of the seed oils of proteaceae: A chemotaxonomic study. *Phytochemistry* **10(1)**, 123-130 (1971).

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