

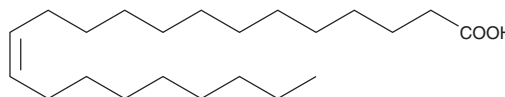
PRODUCT INFORMATION



13(Z)-Docosenoic Acid

Item No. 90175

CAS Registry No.: 112-86-7
Formal Name: 13Z-docosenoic acid
Synonyms: *cis*-13-Docosenoate, (Z)-Erucic Acid
MF: C₂₂H₄₂O₂
FW: 338.6
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

13(Z)-Docosenoic acid 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 DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 13(Z)-docosenoic acid 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. If an organic solvent-free solution of 13(Z)-docosenoic acid is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 13(Z)-docosenoic acid in PBS (pH 7.2) is approximately 100 µg/ml. For maximum aqueous solubility, we suggest dissolving 1 mg of the compound in 200 µl of ethanol, add 200 µl of 0.1 M sodium carbonate, mix well, and then dilute with 500 µl of PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

13(Z)-Docosenoic acid is a 22-carbon monounsaturated fatty acid. 13(Z)-Docosenoic acid is found predominantly in rapeseed oil.¹ 13(Z)-Docosenoic acid is metabolized to oleic acid *in vivo*. Diets rich in 13(Z)-docosenoic acid were shown to cause heart lipidosis in experimental animals.^{2,3} The C-1 amide of docosenoic acid has been identified as one of the anandamide-related neurotransmitters associated with sleep.⁴

References

1. Borg, K. Physiopathological effects of rapeseed oil: A review. *Acta Med. Scand. Suppl.* **585**, 5-13 (1975).
2. Hulan, H.W., Kramer, J.K.G., Mahadevan, S., et al. Relationship between erucic acid and myocardial changes in male rats. *Lipids* **11**, 9-15 (1976)
3. Astorg, P.O. Heart lipidosis induced by short-term feeding of *cis*- or *trans*-docosenoic acids in weanling or 7-week-old rats. *Ann. Nutr. Metab.* **25**, 201-207 (1981).
4. Cravatt, B.F., Prospero-Garcia, O., Siuzdak, G., et al. Chemical characterization of a family of brain lipids that induce sleep. *Science* **268**, 1506-1509 (1995).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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