

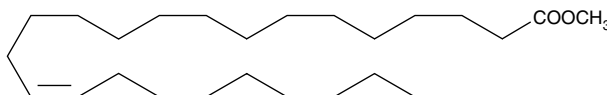
Product Information



Nervonic Acid methyl ester

Item No. 9001351

CAS Registry No.: 2733-88-2
Formal Name: 15Z-tetracosenoic acid, methyl ester
Synonym: Methyl Nervonate
MF: $C_{25}H_{48}O_2$
FW: 380.7
Purity: $\geq 98\%$
Stability: ≥ 1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that nervonic acid methyl ester be stored as supplied at -20°C . It should be stable for at least one year.

Nervonic acid methyl ester 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 nervonic acid methyl ester in these solvents is approximately 20 mg/ml.

Nervonic acid methyl ester is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Nervonic acid (24:1n-9) (Item No. 13940) is a very long chain fatty acid produced by elongation of oleic acid (18:1n-9) (Item No. 90260) and derived from erucic acid (22:1n-9) (Item No. 90175).¹ It is enriched in nervous tissue and is particularly abundant in sphingolipids, such as sphingomyelin in the myelin sheath of nerve fibers.² Nervonic acid is poorly produced in demyelinating disorders, including multiple sclerosis and adrenoleukodystrophy, suggesting that dietary supplementation may be beneficial.³ Nervonic Acid methyl ester is an ester version of the free acid which may be more suitable for the formulation of fatty acid-containing diets and dietary supplements.

References

1. Taylor, D.C., Francis, T., Guo, Y., et al. Molecular cloning and characterization of a KCS gene from *Cardamine graeca* and its heterologous expression in Brassica oilseeds to engineer high nervonic acid oils for potential medical and industrial use. *Plant Biotechnol. J.* **7**, 925-938 (2009).
2. Hirvisalo, E.L. and Renkonen, O. Composition of human serum sphingomyelins. *J. Lipid Res.* **11**, 54-59 (1970).
3. Sargent, J.R., Coupland, K., and Wilson, R. Nervonic acid and demyelinating disease. *Med. Hypotheses* **42**, 237-242 (1994).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/9001351

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com

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