

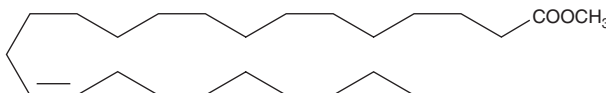
# PRODUCT INFORMATION



## 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:  $\geq 98\%$   
Supplied as: A solution in ethanol  
Storage:  $-20^{\circ}\text{C}$   
Stability:  $\geq 2$  years



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

### Laboratory Procedures

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.

### Description

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).<sup>1</sup> It is enriched in nervous tissue and is particularly abundant in sphingolipids, such as sphingomyelin in the myelin sheath of nerve fibers.<sup>2</sup> Nervonic acid is poorly produced in demyelinating disorders, including multiple sclerosis and adrenoleukodystrophy, suggesting that dietary supplementation may be beneficial.<sup>3</sup> 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(9)**, 925-938 (2009).
2. Hirvisalo, E.L. and Renkonen, O. Composition of human serum sphingomyelins. *J. Lipid Res.* **11(1)**, 54-59 (1970).
3. Sargent, J.R., Coupland, K., and Wilson, R. Nervonic acid and demyelinating disease. *Med. Hypotheses* **42(4)**, 237-242 (1994).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/03/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM