

Produktinformation



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Product Information



Nervonic Acid methyl ester

Item No. 9001351

CAS Decistary No. 2733 88 2

Calo Registry 110.	2/55-00-2	
Formal Name:	15Z-tetracosenoic acid, methyl ester	
Synonym:	Methyl Nervonate	
MF:	$C_{25}H_{48}O_2$	COOCH ₃
FW:	380.7	
Purity:	≥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

WARNING: This product is for laboratory research only: not for administration to humans. Not for human or veterinary DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL 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 Material Safety Data Sheet, which has been sent *via* email to your institution.

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thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material. For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

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