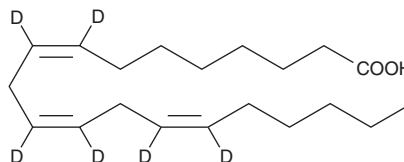


PRODUCT INFORMATION



Dihomo- γ -Linolenic Acid-d₆ Item No. 10458

CAS Registry No.: 81540-86-5
Formal Name: 8Z,11Z,14Z-eicosatrienoic-8,9,11,12,14,15-d₆ acid
Synonym: DGLA-d₆
MF: C₂₀H₂₈D₆O₂
FW: 312.5
Chemical Purity: ≥98% (Dihomo- γ -Linolenic Acid)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥1 year



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

Laboratory Procedures

Dihomo- γ -linolenic acid-d₆ (DGLA-d₆) is intended for use as an internal standard for the quantification of DGLA (Item No. 90230) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

DGLA-d₆ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of DGLA-d₆ in these solvents is approximately 100 mg/ml.

Description

DGLA (20:3), an elongation product of γ -linolenic acid (18:3), is rapidly metabolized by fatty acid desaturases to produce arachidonic acid (20:4). DGLA is metabolized through the cyclooxygenase pathway to produce 1-series prostaglandins, (PGs), including PGE₁.^{1,2} In mice, DGLA supplementation in the diet can reduce atopic dermatitis and atherosclerosis.^{3,4}

References

1. Bell, J.G., Tocher, D.R., and Sargent, J.R. Effect of supplementation with 20:3(n-3), 20:4(n-6) and 20:5(n-3) on the production of prostaglandins E and F of the 1-, 2- and 3-series in turbot (*Scophthalmus maximus*) brain astroglial cells in primary culture. *Biochim. Biophys. Acta* **1211(3)**, 335-342 (1994).
2. Levin, G., Duffin, K.L., Obukowicz, M.G., et al. Differential metabolism of dihomogamma-linolenic acid and arachidonic acid by cyclo-oxygenase-1 and cyclo-oxygenase-2: Implications for cellular synthesis of prostaglandin E₁ and prostaglandin E₂. *Biochem. J.* **365(Pt 2)**, 489-496 (2002).
3. Kawashima, H., Tateishi, N., Shiraishi, A., et al. Oral administration of dihomogamma-linolenic acid prevents development of atopic dermatitis in NC/Nga mice. *Lipids* **43(1)**, 37-43 (2007).
4. Takai, S., Jin, D., Kawashima, H., et al. Anti-atherosclerotic effects of dihomogamma-linolenic acid in ApoE-deficient mice. *J. Atheroscler. Thromb.* **16(4)**, 480-489 (2009).

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, 04/28/2022

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