



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Laborgeräte & Service

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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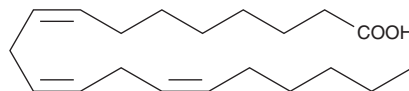
# PRODUCT INFORMATION



## Dihomo- $\gamma$ -Linolenic Acid

Item No. 90230

**CAS Registry No.:** 1783-84-2  
**Formal Name:** 8Z,11Z,14Z-eicosatrienoic acid  
**Synonyms:** DGLA, *cis*-8,11,14-Eicosatrienoic Acid,  $\gamma$ -Homolinolenic Acid  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>2</sub>  
**FW:** 306.5  
**Purity:**  $\geq$ 98%  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:**  $\geq$ 1 year



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

### Laboratory Procedures

Dihomo- $\gamma$ -linolenic acid (DGLA) 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 or dimethyl formamide can be used. To prevent oxidation of DGLA, the solvent should be purged with an inert gas. The solubility of DGLA 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 DGLA is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of DGLA in 0.15 M Tris-HCl (pH 8.5) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

DGLA (20:3), an elongation product of  $\gamma$ -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, including PGE<sub>1</sub>.<sup>1,2</sup> In mice, DGLA supplementation in the diet can reduce atopic dermatitis and atherosclerosis.<sup>3,4</sup>

### References

1. Yagaloff, K.A., Franco, L., Simko, B., *et al.* Essential fatty acids are antagonists of the leukotriene B<sub>4</sub> receptor. *Prostaglandins Leukot. Essent. Fatty Acids* **52**, 293-297 (1995).
2. Schalin-Karrila, M., Mattila, L., Jansen, C.T., *et al.* Evening primrose oil in the treatment of atopic eczema: Effect on clinical status, plasma phospholipid fatty acids and circulating blood prostaglandins. *Br. J. Dermatol.* **117**, 11-19 (1987).

#### 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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