Product Data Sheet

Product Name: γ-Linolenic Acid methyl ester
Cat. No.: GC10020

Chemical Properties

Cas. No.	16326-32-2		
Chemical Name	6Z,9Z,12Z-octadecatrienoic acid, methyl ester		
SMILES	CCCCC/C=C\C/C=C\C/C=C\CCCCC(OC)=O		
Formula	$C_{19}H_{32}O_2$	M.Wt	292.5
Solubility	≤100mg/ml in DMSO;100mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	γ-Linolenic Acid methyl ester		

Background

γ-Linolenic Acid methyl ester is a weak leukotriene B4 (LTB4) receptor antagonist.

LTB 4, a potent neutrophil chemoattractant, is present at high concentrations in psoriatic lesions, bronchoalveolar lavage in asthmatics and rectal dialysates in patients with inflammatory bowel disease.

In vitro: γ-Linolenic acid methyl ester is an esterified version of the free acid which is less water soluble but more amenable for the formulation of GLA-containing diets and dietary supplements. GLA was identified as an ω-6 fatty acid which could be elongated to arachidonic acid for endogenous eicosanoid synthesis. GLA was found to be a weak leukotriene B4 (LTB4) receptor antagonist, which was able to inhibit [3H]-LTB4 binding to porcine neutrophil membranes with a Ki of 1 μM [1].

In vivo: In an in-vivo model of LTB4-induced bronchoconstriction, ricinelaidic acid andγ-

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Linolenic acid methyl ester at a 1 mg/kg i.v. dose could result in 46% and 53% inhibition, respectively, indicating that essential fatty acids are LTB4 receptor antagonists, which may account in part for their reported anti-inflammatory activities [1].

Clinical trial: So far, no clinical study has been conducted.

Reference:
[1] Yagaloff, K. A.,Franco, L.,Simko, B., et al. Essential fatty acids are antagonists of the leukotriene B4 receptor. Prostaglandins, Leukotrienes and Essential Fatty Acids 52, 293-297 (1995).

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA