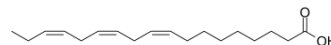


α-Linolenic acid

Cat. No.:	HY-N0728		
CAS No.:	463-40-1		
Molecular Formula:	C ₁₈ H ₃₀ O ₂		
Molecular Weight:	278.43		
Target:	PI3K; Akt		
Pathway:	PI3K/Akt/mTOR		
Storage:	Pure form	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (359.16 mM)
 H₂O : ≥ 100 mg/mL (359.16 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.5916 mL	17.9578 mL	35.9157 mL
	5 mM	0.7183 mL	3.5916 mL	7.1831 mL
	10 mM	0.3592 mL	1.7958 mL	3.5916 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
 Solubility: ≥ 2.5 mg/mL (8.98 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
 Solubility: ≥ 2.5 mg/mL (8.98 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% corn oil**
 Solubility: ≥ 2.5 mg/mL (8.98 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

α-Linolenic acid, isolated from seed oils, is an essential fatty acid that cannot be synthesized by humans. α-Linolenic acid can affect the process of thrombotic through the modulation of **PI3K/Akt** signaling. α-Linolenic acid possess the anti-arrhythmic properties and is related to cardiovascular disease and cancer^[1].

IC₅₀ & Target

PI3K Akt

In Vitro	α -Linolenic acid converses into the longer chain fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) ^[1] .								
In Vivo	<p>α-Linolenic acid (50, 100, 250 mg/kg; for 10 days) can completely inhibit collagen- and adrenaline-induced thrombosis in mice at 250 mg/kg^[1].</p> <p>α-Linolenic acid (35, 70, 175 mg/kg) suppresses A-V thrombus formation in rats (weighing at 250 ~ 300 g)^[1].</p> <p>α-Linolenic acid (70 or 175 mg/kg) inhibits collagen stimulated platelet aggregation in rats^[1].</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Mice weighing at 18 ~ 22 g^[1]</td> </tr> <tr> <td>Dosage:</td> <td>50, 100, 250 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>For 10 days</td> </tr> <tr> <td>Result:</td> <td>Completely inhibited collagen- and adrenaline-induced thrombosis at 250 mg/kg.</td> </tr> </table>	Animal Model:	Mice weighing at 18 ~ 22 g ^[1]	Dosage:	50, 100, 250 mg/kg	Administration:	For 10 days	Result:	Completely inhibited collagen- and adrenaline-induced thrombosis at 250 mg/kg.
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REFERENCES

[1]. Yang Q, et al. Anti-thrombotic effects of α -linolenic acid isolated from *Zanthoxylum bungeanum* Maxim seeds. BMC Complement Altern Med. 2014 Sep 23;14:348.

Caution: Product has not been fully validated for medical applications. For research use only.

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