Retinyl palmitate

Cat. No.: HY-B1384

CAS No.: 79-81-2

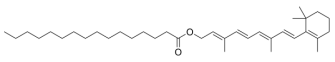
Molecular Formula: $C_{36}H_{60}O_2$

Molecular Weight: 524.86

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: -20°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 10 mg/mL (19.05 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9053 mL	9.5264 mL	19.0527 mL
	5 mM	0.3811 mL	1.9053 mL	3.8105 mL
	10 mM	0.1905 mL	0.9526 mL	1.9053 mL

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

In Vivo

1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1 mg/mL (1.91 mM); Clear solution
2. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
   Solubility: 1 mg/mL (1.91 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 1 mg/mL (1.91 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Retinyl palmitate is an ester of Retinol and is the major form of vitamin A found in the epidermis. Retinyl palmitate has been widely used in pharmaceutical and cosmetic formulations.

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

Retinyl palmitate has a high molecular weight and a stable formulation. To be active, Retinyl palmitate should be enzymatically converted in the skin to retinol by cleavage of the ester linkage and must then be converted to tretinoin via oxidative processes[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	The topical administration of Retinyl palmitate in rats results in increased protein and collagen and an epidermal thickening [1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Oliveira MB, et al. Topical application of retinyl palmitate-loaded nanotechnology-based drug delivery systems for the treatment of skin aging. Biomed Res Int. 2014;2014:632570.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA