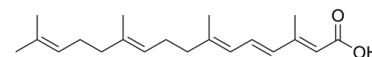


Data Sheet

Product Name:	Peretinoin
Cat. No.:	CS-5529
CAS No.:	81485-25-8
Molecular Formula:	C ₂₀ H ₃₀ O ₂
Molecular Weight:	302.45
Target:	Autophagy; HCV; RAR/RXR; SphK
Pathway:	Anti-infection; Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor
Solubility:	DMSO : 50 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

Peretinoin is an oral acyclic retinoid with a vitamin A-like structure that targets retinoid nuclear receptors such as **retinoid X receptor (RXR)** and **retinoic acid receptor (RAR)**. Peretinoin reduces the mRNA level of **sphingosine kinase 1 (SPHK1)** in vitro by downregulating a transcription factor, Sp1^[1]. Peretinoin prevents the progression of non-alcoholic steatohepatitis (NASH) and the development of hepatocellular carcinoma (HCC) through activating the **autophagy** pathway by increased Atg16L1 expression^[2]. Peretinoin inhibits **HCV** RNA amplification and virus release by altering lipid metabolism with a EC₅₀ of 9 μM^[3]. *In Vitro*: Peretinoin (10-40 μM; 12-72 hours) exhibits suppressed SPHK1 expression after 24 h treatment, even at 10 μM and more prominent after 72 h peretinoin treatment ^[1]. Peretinoin (5 μM; 24 hours) up-regulates the expression of LC3B-II and increases autophagy flux in mouse primary hepatocytes^[2].

References:

- [1]. Funaki M, et al. Peretinoin, an acyclic retinoid, inhibits hepatocarcinogenesis by suppressing sphingosine kinase 1 expression in vitro and in vivo. Sci Rep. 2017 Dec 5;7(1):16978.
- [2]. Okada H, et al. Peretinoin, an acyclic retinoid, suppresses steatohepatitis and tumorigenesis by activating autophagy in mice fed an atherogenic high-fat diet. Oncotarget. 2017 Jun 20;8(25):39978-39993.
- [3]. Honda M, et al. Peretinoin, an acyclic retinoid, improves the hepatic gene signature of chronic hepatitis C following curative therapy of hepatocellular carcinoma. BMC Cancer. 2013 Apr 15;13:191.

CAIndexNames:

2,4,6,10,14-Hexadecapentaenoic acid, 3,7,11,15-tetramethyl-, (2E,4E,6E,10E)-

SMILES:

C/C(C)=C/CC/C(C)=C/CC/C(C)=C/C=C/C(C)=C/C(O)=O

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

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