Data Sheet (Cat.No.T73757)

TargetMol

Phytanic acid

Chemical Properties

CAS No. : 14721-66-5

Formula: C20H40O2

Molecular Weight: 312.53

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Pristanic acid is an endogenous branched fatty acid produced by α -oxidation of phytanic acid, which is further metabolized by β -oxidation in peroxisome. As a metabolite of fatty acids, Pristanic acid can be used as a ligand to activate PPARα, thus regulating the expression of genes related to lipid metabolism and energy homeostasis. Its metabolic abnormalities are related to a variety of peroxisome-related diseases, including Zellweger syndrome, α -methyl acyl-coenzyme A racemase deficiency, and infantile Refsum disease.
Targets(IC50)	Endogenous Metabolite,PPAR
In vitro	In cell proliferation assays using multiple cancer cell lines, Phytanic acid acted as an endogenous toxic metabolite and induced significant apoptosis and cell cycle arrest [1].
In vivo	In tumor-bearing mouse models, systemic administration of Phytanic acid resulted in a decrease in tumor burden [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1997 mL	15.9985 mL	31.9969 mL
5 mM	0.6399 mL	3.1997 mL	6.3994 mL
10 mM	0.320 mL	1.5998 mL	3.1997 mL
50 mM	0.064 mL	0.320 mL	0.6399 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lee N, et al. Endogenous toxic metabolites and implications in cancer therapy. Oncogene. 2020 Aug;39(35):5709-5720.

Budden SS, et al. Dysmorphic syndrome with phytanic acid oxidase deficiency, abnormal very long chain fatty acids, and pipecolic acidemia: studies in four children. J Pediatr. 1986 Jan;108(1):33-9.