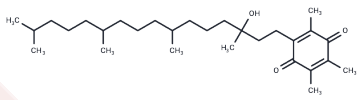
Data Sheet (Cat.No.T7050)

TargetMol

alpha-Tocopherolquinone

Chemical Properties



CAS No. : 7559-04-8

Formula: C29H50O3

Molecular Weight: 446.71

Storage: Keep away from direct sunlight
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	During hypoxia in rats, levels of α-tocopherylquinon have been found to rise. alpha-Tocopherolquinone (Metarene) is reported to downregulate the respiratory activity of mitochondria. alpha-Tocopherolquinone has also displayed antioxidant activities after it is reduced to tocopherylhydroquinone.
Targets(IC50)	Antioxidant,ROS

Solubility Information

Solubility	DMSO: 50 mg/mL (111.93 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.48 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2386 mL	11.1929 mL	22.3859 mL
5 mM	0.4477 mL	2.2386 mL	4.4772 mL
10 mM	0.2239 mL	1.1193 mL	2.2386 mL
50 mM	0.0448 mL	0.2239 mL	0.4477 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

Siegel D, et al. The Reduction of α-Tocopherolquinone by Human NAD(P)H:Quinone Oxidoreductase: The Role of α-Tocopherolhydroquinone as a Cellular Antioxidant[J]. Molecular Pharmacology, 1997, 52(2):300-305.
Kanazawa H, et al. Determination of α-tocopherol and α-tocopherylquinone in rat tissues and plasma by high-performance liquid chromatography with electrochemical detection.[J]. Chemical & Pharmaceutical Bulletin, 2000, 48(10):1462-1466.
Lars Gille, et al. Redox-interaction of α-tocopheryl quinone with isolated mitochondrial cytochrome complex[J]. Biochemical Pharmacology, 2004, 68(2):373-381.