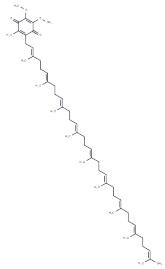
Data Sheet (Cat.No.T5573)

TargetMol

Coenzyme Q9

Chemical Properties



CAS No. : 303-97-9

Formula: C54H82O4

Molecular Weight: 795.23

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	Coenzyme Q9 (Ubiquinone 9) (CoQ9) is a normal constituent of human plasma. CoQ9 in human plasma may originate as a product of incomplete CoQ10 biosynthesis or from the diet.
Targets(IC50)	Apoptosis,Endogenous Metabolite
In vitro	Coenzyme Q9 were cardioprotective, as evidenced by their abilities to improve left ventricular performance and to reduce myocardial infarct size and cardiomyocyte apoptosis[1].
In vivo	Mutations in the gene that encodes Coenzyme Q9(CoQ9) are associated with encephalomyopathy and autosomal-recessive, neonatal-onset, primary CoQ10 deficiency.While in humans CoQ10 predominates, mice and C. elegans primarily rely on CoQ9 for electron transport through the mitochondrial respiratory chain and for antioxidant functions[2,3].
Animal Research	Guinea pigs were randomly divided into three groups: groups I and II were fed CoQ 9 and CoQ10, respectively, for 30 days while group III served as control.?After 30 days, the guinea pigs were sacrificed and isolated hearts were perfused via working mode were subjected to 30 min ischemia followed by 2 h of reperfusion.?Cardioprotection was assessed by evaluating left ventricular function, ventricular arrhythmias, myocardial infarct size, and cardiomyocyte apoptosis.?Samples of hearts were examined for the presence of CoQ9 and CoQ10[1].

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble) DMF: 10 mg/mL (12.57 mM),Sonication and heating are recommended. H2O: < 1 mg/mL (insoluble or slightly soluble) Ethanol: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2575 mL	6.2875 mL	12.575 mL
5 mM	0.2515 mL	1.2575 mL	2.515 mL
10 mM	0.1257 mL	0.6287 mL	1.2575 mL
50 mM	0.0251 mL	0.1257 mL	0.2515 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

Lekli I, et al. Coenzyme Q9 provides cardioprotection after converting into coenzyme Q10. J Agric Food Chem. 2008 Jul 9;56(13):5331-7.

Duncan, A.J., Bitner-Glindzicz, M., Meunier, B., et al. A nonsense mutation in COQ9 causes autosomal-recessive neonatal-onset primary coenzyme Q10 deficiency: A potentially treatable form of mitochondrial disease.American Journal of Human Genetics 84(5), 558-566 (2009).

Lapointe, J., Wang, Y., Bigras, E., et al. The submitochondrial distribution of ubiquinone affects respiration in long-lived Mclk1+/- mice. Journal of Cell Biology 199(2), 215-224 (2012).

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