Pyrroloquinoline quinone

Cat. No.: HY-100196

CAS No.: 72909-34-3

Molecular Formula: $C_{14}H_6N_2O_8$

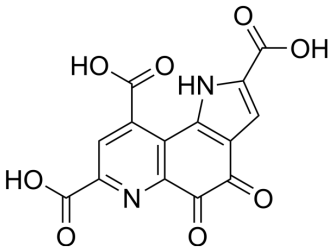
Molecular Weight: 330.21

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 1 mg/mL (3.03 mM; ultrasonic and warming and heat to 60°C)

DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.0284 mL	15.1419 mL	30.2838 mL
5 mM	---	---	---
10 mM	---	---	---

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

In Vivo

1. Add each solvent one by one: 0.5% CMC/saline water
   Solubility: 4 mg/mL (12.11 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: PBS
   Solubility: 1 mg/mL (3.03 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Pyrroloquinoline quinone (PQQ), a redox co-factor, is an anionic, redox-cycling orthoquinone. Pyrroloquinoline quinone is isolated from cultures of methylotropic bacteria and tissues of mammals. Pyrroloquinoline quinone is an essential nutrient for mammals and is important for immune function[1][2].

IC_{50} & Target

Microbial Metabolite | Human Endogenous Metabolite

In Vitro

Mouse pups born to and nursing from Pyrroloquinoline quinone (PQQ)-deprived dams have a compromised immune response as well as alopecia, a hunched posture, and a susceptibility to aortic aneurysms[2].

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

CUSTOMER VALIDATION

- Antioxidants (Basel). 2024 Jan 15, 13(1), 104.

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REFERENCES

[1]. Moog RS, et al. Evidence for methoxatin (pyrroloquinolinequinone) as the cofactor in bovine plasma amine oxidase from resonance Raman spectroscopy. Proc Natl Acad Sci U S A. 1986 Nov;83(22):8435-9.

[2]. Bishop A, et al. Methoxatin (PQQ) in guinea-pig neutrophils. Free Radic Biol Med. 1994 Oct;17(4):311-20.

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