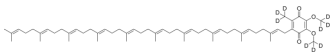
Coenzyme Q10-d_9

Cat. No.:	HY-N0111S2
CAS No.:	2687960-97-8
Molecular Formula:	$C_{59}H_{81}D_9O_4$
Molecular Weight:	872.4
Target:	Ferroptosis; Endogenous Metabolite; Reactive Oxygen Species; Isotope-Labeled Compounds
Pathway:	Apoptosis; Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB; Others
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Coenzyme Q10-d_9 is the deuterium labeled Coenzyme Q10. Coenzyme Q10 is an essential cofactor of the electron transport chain and a potent antioxidant agent.
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Yang YK, et al. Coenzyme Q10 treatment of cardiovascular disorders of ageing including heart failure, hypertension and endothelial dysfunction. Clin Chim Acta. 2015 Oct 23;450:83-9.

[3]. Bhagavan HN, et al. Coenzyme Q10: absorption, tissue uptake, metabolism and pharmacokinetics. Free Radic Res. 2006 May;40(5):445-53.

[4]. Matthews RT, et al. Coenzyme Q10 administration increases brain mitochondrial concentrations and exerts neuroprotective effects. Proc Natl Acad Sci U S A. 1998 Jul 21;95(15):8892-7.

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