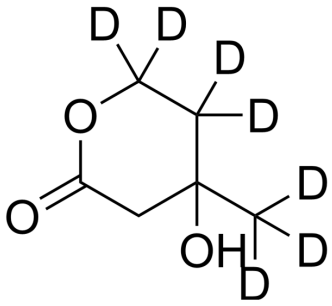
DL-Mevalonolactone-d_7

Cat. No.:	HY-107855S
CAS No.:	347840-19-1
Molecular Formula:	$C_6H_3D_7O_3$
Molecular Weight:	137.18
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Pure form -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	DL-Mevalonolactone-d_7 is the deuterium labeled DL-Mevalonolactone. DL-Mevalonolactone ((±)-Mevalonolactone) is the δ-lactone form of mevalonic acid, a precursor in the mevalonate pathway. DL-Mevalonolactone (Mevalonolactone) decreases mitochondrial membrane potential (ΔΨm), NAD(P)H content and the capacity to retain Ca2+ in the brain, besides inducing mitochondrial swelling[1][2].
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]. Domingos SR, et al. On the structural intricacies of a metabolic precursor: Direct spectroscopic detection of water-induced conformational reshaping of mevalonolactone. J Chem Phys. 2017 Sep 28;147(12):124310.

[3]. Cecatto C, et al. Mevalonolactone disrupts mitochondrial functions and induces permeability transition pore opening in rat brain mitochondria: Implications for the pathogenesis of mevalonic aciduria. Neurochem Int. 2017 Sep;108:133-145.

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