
Product Data Sheet

Product Name: DL-Mevalonolactone-d7

Cat. No.: GC68384

Chemical Properties

Cas. No. 347840-19-1

Formula $C_6H_3D_7O_3$ M.Wt 137.18

Solubility Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure

Background

DL-Mevalonolactone-d7 ((±)-Mevalonolactone-d7) 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 (ψ_m), NAD(P)H content and the capacity to retain Ca^{2+} in the brain, besides inducing mitochondrial swelling^{[1][2]}.

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].

[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

Caution: Product has not been fully validated for medical applications. For research use only.

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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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