Product Data Sheet

Product Name: Cholesterol-13C5
Cat. No.: GC64334

Chemical Properties

Cas. No.	150044-24-9		
Formula	C2213C5H46O	M.Wt	391.62
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Cholesterol-13C5		

Background

Cholesterol-13C5 is the 13C-labeled Cholesterol. Cholesterol is the major sterol in mammals and is makes up 20-25% of structural component of the plasma membrane. Plasma membranes are highly permeable to water but relatively impermeable to ions and protons. Cholesterol plays an important role in determining the fluidity and permeability characteristics of the membrane as well as the function of both the transporters and signaling proteins[1][2]. Cholesterol is also an endogenous estrogen-related receptor α (ERRα) agonist[3].

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]. Fukui K, et al. Effect of Cholesterol Reduction on Receptor Signaling in Neurons. J Biol Chem. 2015 Sep 14.
[3]. Fukui K, et al. Effect of Cholesterol Reduction on Receptor Signaling in Neurons. J Biol Chem. 2015 Sep 14.
[4]. Dietschy JM, et al. Thematic review series: brain Lipids. Cholesterol metabolism in

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the central nervous system during early development and in the mature animal. J Lipid Res. 2004 Aug;45(8):1375-97.
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[6]. Casaburi I, et al. Cholesterol as an Endogenous ERRα Agonist: A New Perspective to Cancer Treatment. Front Endocrinol (Lausanne). 2018 Sep 11;9:525.
[7]. Casaburi I, et al. Cholesterol as an Endogenous ERRα Agonist: A New Perspective to Cancer Treatment. Front Endocrinol (Lausanne). 2018 Sep 11;9:525.

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