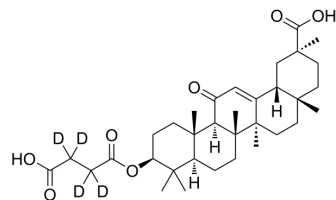


Carbenoxolone-d₄

Cat. No.:	HY-B1588S
Molecular Formula:	C ₃₄ H ₄₆ D ₄ O ₇
Molecular Weight:	574.78
Target:	Amyloid-β; HIV; 11β-HSD
Pathway:	Neuronal Signaling; Anti-infection; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	<p>Carbenoxolone-d₄ is deuterium labeled Carbenoxolone. Carbenoxolone, a semi-synthetic derivative of glycyrrhetic acid, has previously been used for the management of dyspepsia and peptic ulcer because of its anti-inflammatory properties[3]. Carbenoxolone, a general hemichannel and gap junction inhibitor, has the therapeutic potential of carbenoxolone in the research of chronic liver disease[2]. Carbenoxolone is a suitable candidate for the inhibition of Aβ₄₂ aggregation and the therapeutic potential of Cbx against AD[1]. Carbenoxolone is small molecule Pannexin1 (Panx1, is an ATP release channel) inhibitor, attenuate Panx1 channel activity through modulation of the first extracellular loop[4]. Carbenoxolone is an 11β-hydroxysteroid dehydrogenase type 1 (11β-HSD1) inhibitor that converts inactive glucocorticoid into an active form. Carbenoxolone has antiviral activity against DENV infection targeting the virus itself[6].</p>
In Vitro	<p>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.</p>

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Crespo Yanguas S, et al. TAT-Gap19 and Carbenoxolone Alleviate Liver Fibrosis in Mice. *Int J Mol Sci.* 2018 Mar 12;19(3). pii: E817.
- [3]. Hirata K, et al. Formulation of carbenoxolone for delivery to the skin. *Int J Pharm.* 2013 May 20;448(2):360-5.
- [4]. Kim J, et al. Protective effect of carbenoxolone on ER stress-induced cell death in hypothalamic neurons. *Biochem Biophys Res Commun.* 2015 Dec 25;468(4):793-9.
- [5]. Michalski K, et al. Carbenoxolone inhibits Pannexin1 channels through interactions in the first extracellular loop. *J Gen Physiol.* 2016 Feb;147(2):165-74.
- [6]. Pu J, et al. Antiviral activity of Carbenoxolone disodium against dengue virus infection. *J Med Virol.* 2017 Apr;89(4):571-581
- [7]. Sharma S, et al. Inhibition of Alzheimer's amyloid-beta aggregation in-vitro by carbenoxolone:Insight into mechanism of action. *Neurochem Int.* 2017 Sep;108:481-493.

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

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