Tetrahydrodeoxycorticosterone-d_3

Cat. No.: HY-113346S

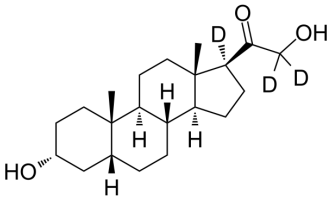
CAS No.: 72205-58-4

Molecular Formula: $C_{21}H_{31}D_3O_3$

Molecular Weight: 337.51

Target: GABA Receptor; Endogenous Metabolite

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease



Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (296.29 mM; Need ultrasonic and warming)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.9629 mL	14.8144 mL	29.6287 mL
5 mM	0.5926 mL	2.9629 mL	5.9258 mL
10 mM	0.2963 mL	1.4814 mL	2.9629 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Tetrahydrodeoxycorticosterone-d_3 is the deuterium labeled Tetrahydrodeoxycorticosterone.
Tetrahydrodeoxycorticosterone, an neurosteroid, is a potent positive allosteric modulator (PAM) of GABAA receptor.
Tetrahydrodeoxycorticosterone has potent neuroinhibitory properties[1][2][3].

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.

CUSTOMER VALIDATION

- Cell Rep Med. 2023 May 24;101061.

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REFERENCES

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

[2]. Hua-Jun Feng, et al. Comparison of αβδ and αβγ GABA A receptors: Allosteric modulation and identification of subunit arrangement by site-selective general anesthetics. Pharmacol Res. 2018 Jul;133:289-300.

[3]. Roger F Butterworth. Neurosteroids in hepatic encephalopathy: Novel insights and new therapeutic opportunities. J Steroid Biochem Mol Biol. 2016 Jun;160:94-7.

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