Tetrahydrodeoxycorticosterone

Cat. No.: HY-113346

CAS No.: 567-03-3

Molecular Formula: $C_{21}H_{34}O_3$

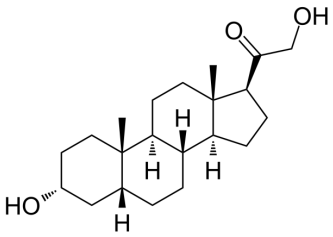
Molecular Weight: 334.49

Target: GABA Receptor; Endogenous Metabolite

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

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (298.96 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9896 mL	14.9481 mL	29.8963 mL
	5 mM	0.5979 mL	2.9896 mL	5.9793 mL
	10 mM	0.2990 mL	1.4948 mL	2.9896 mL

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

BIOLOGICAL ACTIVITY

Description

Tetrahydrodeoxycorticosterone, an neurosteroid, is a potent positive allosteric modulator (PAM) of $GABA_A$ receptor. Tetrahydrodeoxycorticosterone has potent neuroinhibitory properties[1][2].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

The endogenous neurosteroid Tetrahydrodeoxycorticosterone (THDOC) at physiological concentrations selectively enhances tonic currents mediated by αβδ receptors[1].

In hippocampus, 10 nM Tetrahydrodeoxycorticosterone reduces neuronal excitability by augmenting tonic αβδ receptor currents. In thalamocortical neurons, although 100 nM Tetrahydrodeoxycorticosterone enhances tonic currents, 10 nM Tetrahydrodeoxycorticosterone does not[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Concentrations of Tetrahydrodeoxycorticosterone (THDOC) in brain tissue from mice with hepatic encephalopathy (HE) resulting from toxic liver injury are sufficient to induce sedation in animals of the same species[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. 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.

[2]. 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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