Propofol-d_{18}

Cat. No.: HY-B0649S1

CAS No.: 1189467-93-3

Molecular Formula: $C_{12}D_{18}O$

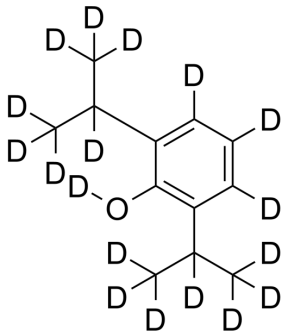
Molecular Weight: 196.38

Target: GABA Receptor; Endogenous Metabolite

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

Storage:

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (254.61 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	5.0922 mL	25.4608 mL	50.9217 mL
	5 mM	1.0184 mL	5.0922 mL	10.1843 mL
	10 mM	0.5092 mL	2.5461 mL	5.0922 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.25 mg/mL (6.37 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (6.37 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (6.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Propofol-d_{18} is the deuterium labeled Propofol. Propofol potently and directly activates GABAA receptor and inhibits glutamate receptor mediated excitatory synaptic transmission[1].

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.

REFERENCES

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

[2]. R Nadeson, et al. Antinociceptive Properties of Propofol: Involvement of Spinal Cord Gamma-Aminobutyric acid(A) Receptors. J Pharmacol Exp Ther . 1997 Sep;282(3):1181-6.

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