Propofol

Cat. No.: HY-B0649

CAS No.: 2078-54-8

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

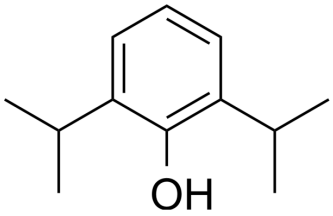
Molecular Weight: 178.27

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 : 100 mg/mL (560.95 mM; Need ultrasonic)

H_2O : 0.5 mg/mL (2.80 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.6095 mL	28.0473 mL	56.0947 mL
5 mM	1.1219 mL	5.6095 mL	11.2189 mL
10 mM	0.5609 mL	2.8047 mL	5.6095 mL

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

In Vivo

1. Add each solvent one by one: 50% PEG300 >> 50% saline
   Solubility: 8.33 mg/mL (46.73 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (14.02 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (14.02 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (14.02 mM); Clear solution
5. Add each solvent one by one: Saline
   Solubility: 2.1 mg/mL (11.78 mM); Clear solution; Need ultrasonic
6. Add each solvent one by one: PBS
   Solubility: 1 mg/mL (5.61 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description	Propofol potently and directly activates $GABA_A$ receptor and inhibits glutamate receptor mediated excitatory synaptic transmission. Propofol has antinociceptive properties and is used for sedation and hypnotic[1].
IC_{50} & Target	$GABA_A$[1]
In Vivo	Propofol (i.p.; 40 mg/kg) causes full recovery from sedation occurred 36.3 mins. There is residual antinociception when assessed by ECT but not when assessed by noxious heat[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Inflammation. 2021 Jan 26.
- Eur J Neurosci. 2021 Nov 4.
- Front Biosci (Landmark Ed). 2022, 27(11)
- Biochem Biophys Res Commun. 1 January 2022, Pages 121-128.
- Oncol Lett. 2020 Jul;20(1):810-816.

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REFERENCES

[1]. 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.

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

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