Licarbazepine

Cat. No.: HY-108506

CAS No.: 29331-92-8

Molecular Formula: $C_{15}H_{14}N_2O_2$

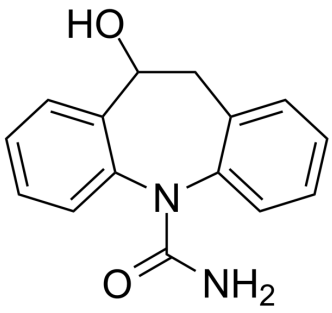
Molecular Weight: 254.28

Target: Sodium Channel

Pathway: Membrane Transporter/Ion Channel

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 (393.27 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.9327 mL	19.6634 mL	39.3267 mL
	5 mM	0.7865 mL	3.9327 mL	7.8653 mL
	10 mM	0.3933 mL	1.9663 mL	3.9327 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: ≥ 2.5 mg/mL (9.83 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.83 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Licarbazepine (BIA 2-005; GP 47779) is a voltage-gated sodium channel blocker with anticonvulsant and mood-stabilizing effects[1].

IC_{50} & Target

Sodium Channel[1]

In Vivo

Eslicarbazepine acetate (ESL) is an oral pro-drug that is rapidly and extensively metabolized by the liver via a hydrolytic first-pass metabolism into S-Licarbazepine, the biologically active drug. The plasma level of the prodrug remains below

quantification[1].

ESL is a potent antiepileptic agent with a spectrum of action essentially limited to partial-onset and generalized tonic-clonic seizures. Its main mechanism of action is by blocking the voltage-gated sodium channel. ESL works by blocking the voltage-gated sodium channel, which play an essential role in the generation and propagation of the epileptic discharge. ESL is well absorbed after oral administration with a bio-availability about 16% higher than that observed after an equivalent dose of Oxcarbazepine (OXC)[1].

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

CUSTOMER VALIDATION

- Talanta. 17 October 2022, 124020.

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REFERENCES

[1]. Rajinder P Singh, et al. A review of eslicarbazepine acetate for the adjunctive treatment of partial-onset epilepsy. J Cent Nerv Syst Dis. 2011 Jul 20;3:179-87.

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