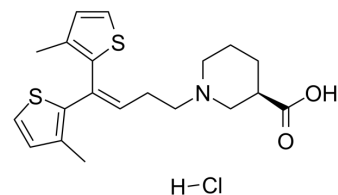


Tiagabine hydrochloride

Cat. No.:	HY-B0696A
CAS No.:	145821-59-6
Molecular Formula:	C ₂₀ H ₂₆ ClNO ₂ S ₂
Molecular Weight:	412.01
Target:	GABA Receptor
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (242.71 mM; Need ultrasonic)
 DMSO : ≥ 53 mg/mL (128.64 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM	2.4271 mL	12.1356 mL	24.2713 mL
	5 mM	0.4854 mL	2.4271 mL	4.8543 mL	
	10 mM	0.2427 mL	1.2136 mL	2.4271 mL	

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (5.05 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (5.05 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (5.05 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tiagabine hydrochloride is a potent and selective GABA reuptake inhibitor, used as an anticonvulsant agent, with IC₅₀s of 67, 446 and 182 nM for [³H]GABA uptake in Synaptosomes, Neurons and Glia, respectively^[1].

REFERENCES

- [1]. Braestrup C, et al. (R)-N-[4,4-bis(3-methyl-2-thienyl)but-3-en-1-yl]nipecotic acid binds with high affinity to the brain gamma-aminobutyric acid uptake carrier. J

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[2]. Sheehan, D.V., et al., An open-label study of tiagabine in panic disorder. Psychopharmacol Bull, 2007. 40(3): p. 32-40.

[3]. Henjum, S. and B. Hassel, High-affinity GABA uptake and GABA-metabolizing enzymes in pig forebrain white matter: a quantitative study. Neurochem Int, 2007. 50(2): p. 365-70.

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

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