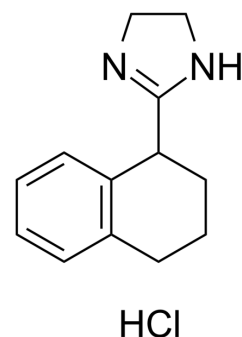


Tetrahydrozoline hydrochloride

Cat. No.:	HY-B0556A
CAS No.:	522-48-5
Molecular Formula:	C ₁₃ H ₁₇ ClN ₂
Molecular Weight:	236.74
Target:	Adrenergic Receptor
Pathway:	GPCR/G Protein; 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 : ≥ 50 mg/mL (211.20 mM)
 DMSO : 16.67 mg/mL (70.41 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		4.2240 mL	21.1202 mL	42.2404 mL
	5 mM		0.8448 mL	4.2240 mL	8.4481 mL
	10 mM		0.4224 mL	2.1120 mL	4.2240 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (422.40 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 1.67 mg/mL (7.05 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 1.67 mg/mL (7.05 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 1.67 mg/mL (7.05 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tetrahydrozoline hydrochloride (Tetryzoline hydrochloride), a derivative of imidazoline, is an α-adrenergic agonist that causes vasoconstriction. Tetrahydrozoline hydrochloride is widely used for the research of nasal congestion and conjunctival congestion^{[1][2]}.

IC₅₀ & Target

α-adrenergic^[1]

In Vitro

Tetrahydrozoline hydrochloride (0.05% HCl-tetrahydrozoline diluted with DMEM to 1:20 concentration; 24 hours) induces the synthesis of collagen types I and III in primary human gingival fibroblasts^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. E Kisilevsky, et al. Anterior and posterior segment vasculopathy associated with long-term use of tetrahydrozoline. CMAJ. 2018 Oct 9;190(40):E1208.
- [2]. Judy Peat, et al. Determination of tetrahydrozoline in urine and blood using gas chromatography-mass spectrometry (GC-MS). Methods Mol Biol. 2010;603:501-8.
- [3]. Danuta Nowakowska, et al. In vitro effects of vasoconstrictive retraction agents on primary human gingival fibroblasts. Exp Ther Med. 2020 Mar; 19(3): 2037-2044.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA