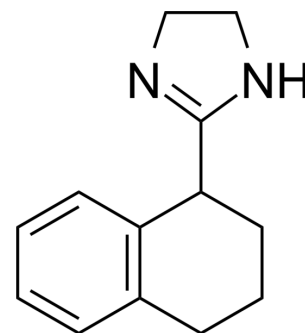


## Tetrahydrozoline

Cat. No.:	HY-B0556
CAS No.:	84-22-0
Molecular Formula:	C <sub>13</sub> H <sub>16</sub> N <sub>2</sub>
Molecular Weight:	200.28
Target:	Adrenergic Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (499.30 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	4.9930 mL	24.9650 mL	49.9301 mL
				5 mM	0.9986 mL	4.9930 mL	9.9860 mL
				10 mM	0.4993 mL	2.4965 mL	4.9930 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 (12.48 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (12.48 mM); Clear solution						

### BIOLOGICAL ACTIVITY

Description	Tetrahydrozoline (Tetryzoline), a derivative of imidazoline, is an α-adrenergic agonist that causes vasoconstriction. Tetrahydrozoline is widely used for the research of nasal congestion and conjunctival congestion <sup>[1][2]</sup> .
In Vitro	Tetrahydrozoline (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 <sup>[3]</sup> . 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.

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[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.**

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