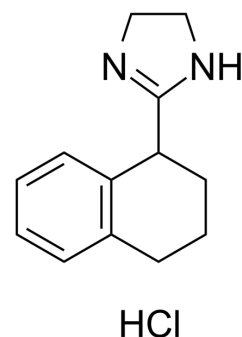


Tetrahydrozoline hydrochloride

| | |
|---------------------------|--|
| 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 Concentration | Mass | 1 mg | 5 mg | 10 mg |
|---------------------------|-----------------------|------|-----------|------------|------------|
| | | | | | |
| | 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.
-

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