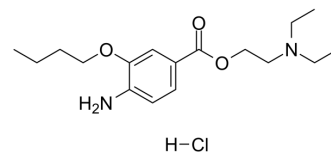


## Oxybuprocaine hydrochloride

<b>Cat. No.:</b>	HY-B1288		
<b>CAS No.:</b>	5987-82-6		
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>29</sub> ClN <sub>2</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	344.88		
<b>Target:</b>	Sodium Channel		
<b>Pathway:</b>	Membrane Transporter/Ion Channel		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (289.96 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM		2.8996 mL	14.4978 mL	28.9956 mL
		5 mM		0.5799 mL	2.8996 mL	5.7991 mL
10 mM			0.2900 mL	1.4498 mL	2.8996 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (7.25 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.25 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (7.25 mM); Clear solution</li> </ol>					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Oxybuprocaine hydrochloride (Benoxinate hydrochloride) reversibly blocks sodium channels and prevents propagation of painful nerve impulses in the cornea, conjunctiva, and sclera. Oxybuprocaine hydrochloride is used especially in ophthalmology and otolaryngology <sup>[1][2][3]</sup> .
<b>In Vivo</b>	Oxybuprocaine hydrochloride (Benoxinate hydrochloride; 27.6, 51.7, 103.5, 413.9 μg; s.c.) provides a dose-dependent block to pinpricks in rats <sup>[1]</sup> . Oxybuprocaine hydrochloride (27.6 μg) produces 100% of sensory/nociceptive block <sup>[1]</sup> .

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

Animal Model:	Male Sprague-Dawley rats (203-253 g) <sup>[1]</sup>
Dosage:	27.6, 51.7, 103.5, 413.9 µg
Administration:	SC
Result:	Provided a dose-dependent block to pinpricks.

## REFERENCES

- [1]. Chen YW, et al. The Addition of Epinephrine to Proxymetacaine or Oxybuprocaine Solution Increases the Depth and Duration of Cutaneous Analgesia in Rats. *Reg Anesth Pain Med.* 2016 Sep-Oct;41(5):601-6.
- [2]. Chen YW, et al. Adding Dopamine to Proxymetacaine or Oxybuprocaine Solutions Potentiates and Prolongs the Cutaneous Antinociception in Rats. *Anesth Analg.* 2018 May;126(5):1721-1728.
- [3]. Page M, et al. Safety, efficacy, and patient acceptability of lidocaine hydrochloride ophthalmic gel as a topicalocular anesthetic for use in ophthalmic procedures. *Clin Ophthalmol.* 2009;3:601-9. Epub 2009 Nov 2.

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

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