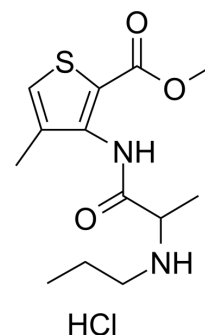


Articaine hydrochloride

Cat. No.:	HY-B0516
CAS No.:	23964-57-0
Molecular Formula:	C ₁₃ H ₂₁ ClN ₂ O ₃ S
Molecular Weight:	320.84
Target:	Sodium Channel; NF-κB; NOD-like Receptor (NLR)
Pathway:	Membrane Transporter/Ion Channel; NF-κB; Immunology/Inflammation
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 100 mg/mL (311.68 mM; Need ultrasonic)				
	DMSO : 100 mg/mL (311.68 mM; Need ultrasonic)				
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div> <div>Mass</div>	1 mg	5 mg	10 mg
		1 mM	3.1168 mL	15.5841 mL	31.1682 mL
		5 mM	0.6234 mL	3.1168 mL	6.2336 mL
10 mM		0.3117 mL	1.5584 mL	3.1168 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (311.68 mM); Clear solution; Need ultrasonic				
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (7.79 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.79 mM); Clear solution				
	4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (7.79 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Articaine hydrochloride (Hoe-045) is an amide anaesthetic containing an ester group, reversibly binding to the α-subunit of the voltage-gated sodium channels within the inner cavity of the nerve, can provide effective pain relief. Articaine hydrochloride ameliorates LPS-induced acute kidney injury via inhibition of NF-κB activation and the NLRP3 inflammasome pathway ^{[1][2][3]} .
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REFERENCES

- [1]. Yapp KE, et al. Articaine: a review of the literature. Br Dent J. 2011 Apr 9;210(7):323-9.
- [2]. Zhao G, et al. Local anesthetic articaine ameliorates LPS-induced acute kidney injury via inhibition of NF- κ B activation and the NLRP3 inflammasome pathway. J Biochem Mol Toxicol. 2020 Oct;34(10):e22554.
- [3]. Snoeck M. Articaine: a review of its use for local and regional anesthesia. Local Reg Anesth. 2012;5:23-33.
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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