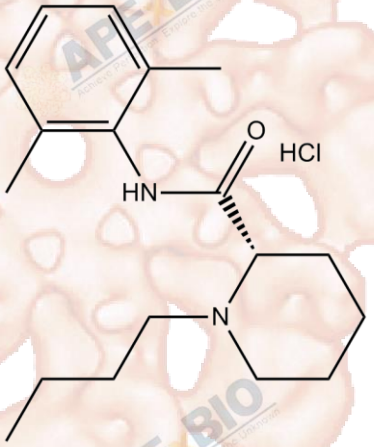
Bupivacaine HCl

Cat. No.: B1420
CAS No.: 18010-40-7
Formula: C18H28N2O·HCl
M.Wt: 324.89
Synonyms:
Target: Membrane Transporter/Ion Channel
Pathway: Sodium Channel
Storage: Store at -20°C



Solvent & Solubility

In Vitro

⩾10.25 mg/mL in DMSO; ⩾16.23 mg/mL in H2O with ultrasonic; ⩾69.2 mg/mL in EtOH

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	3.0780 mL	15.3898 mL	30.7796 mL
5 mM	0.6156 mL	3.0780 mL	6.1559 mL
10 mM	0.3078 mL	1.5390 mL	3.0780 mL

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

Biological Activity

Shortsummary	Anaesthetic drug
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	FDB muscle fibers
Preparation method:	The solubility of this compound in DMSO is > 10.3 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.

	Reacting conditions:	1 mM; 40 mins
	Applications:	In FDB muscle fibers treated with 1 mM Bupivacaine HCl for 40 mins, the TMRM signal was substantially lost and the fiber shortened significantly. The TMRM signal decreased within about 30 mins, and depolarization was inhibited by CsA, which indicated that Bupivacaine facilitated the opening of the permeability transition pore, eventually causing mitochondrial depolarization.
In Vivo	**Animal experiment**	
	Animal models:	ACLT osteoarthritic rats
	Dosage form:	0.5%, 10 mL; intra-articular injection; once a week for 5 consecutive weeks
	Applications:	In ACLT osteoarthritic rats treated with Bupivacaine HCl, the relative weight-bearing values were significantly lower at the 6th and 7th weeks. Besides, Bupivacaine HCl did not show any significant effect on the viability and density of chondrocytes, as well as the histological characteristics of articular cartilage when compared with saline solution injections.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Irwin W, Fontaine E, Agnolucci L, Penzo D, Betto R, Bortolotto S, Reggiani C, Salviati G, Bernardi P. Bupivacaine myotoxicity is mediated by mitochondria. J Biol Chem. 2002 Apr 5;277(14):12221-7.

[2]. Iwasaki K, Sudo H, Kasahara Y, Yamada K, Ohnishi T, Tsujimoto T, Iwasaki N. Effects of Multiple Intra-articular Injections of 0.5% Bupivacaine on Normal and Osteoarthritic Joints in Rats. Arthroscopy. 2016 Oct;32(10):2026-2036.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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