

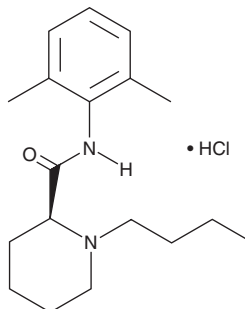
# PRODUCT INFORMATION



## Levobupivacaine (hydrochloride)

Item No. 31596

**CAS Registry No.:** 27262-48-2  
**Formal Name:** 1-butyl-N-(2,6-dimethylphenyl)-(2S)-2-piperidinecarboxamide, monohydrochloride  
**Synonym:** (S)-(-)-Bupivacaine  
**MF:** C<sub>18</sub>H<sub>28</sub>N<sub>2</sub>O • HCl  
**FW:** 324.9  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Levobupivacaine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the levobupivacaine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Levobupivacaine (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of levobupivacaine (hydrochloride) in these solvents is approximately 1 mg/ml.

Levobupivacaine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, levobupivacaine (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Levobupivacaine (hydrochloride) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Levobupivacaine is a sodium channel blocker and local anesthetic, as well as the levorotary stereoisomer of bupivacaine (Item No. 16618).<sup>1-3</sup> It inhibits cardiac sodium channel currents ( $I_{Na}$ ) by 57.8% in isolated guinea pig ventricular myocytes when used at a concentration of 10  $\mu$ M.<sup>1</sup> Levobupivacaine (10  $\mu$ M) reduces the maximal rate of depolarization ( $V_{max}$ ) and action potential duration to 76.7 and 83.4% of controls, respectively, in isolated guinea pig papillary muscle.<sup>2</sup> It induces a complete block of proprioception, motor function, and nociception in the hindleg of rats when administered at a dose of 7.7 mM by percutaneous injection into the sciatic nerve.<sup>3</sup>

### References

- Valenzuela, C., Snyder, D.J., Bennett, P.B., *et al.* Stereoselective block of cardiac sodium channels by bupivacaine in guinea pig ventricular myocytes. *Circulation* **92(10)**, 3014-3024 (1995).
- Vanhoutte, F., Vereecke, J., Verbeke, N., *et al.* Stereoselective effects of the enantiomers of bupivacaine on the electrophysiological properties of the guinea-pig papillary muscle. *Br. J. Pharmacol.* **103(1)**, 1275-1281 (1991).
- Sinnott, C.J. and Strichartz, G.R. Levobupivacaine versus ropivacaine for sciatic nerve block in the rat. *Reg. Anesth. Pain Med.* **28(4)**, 294-303 (2003).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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