

# Produktinformation



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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## SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in



# **PRODUCT INFORMATION**



# Levobupivacaine-do (hydrochloride)

Item No. 38904

Formal Name: 1-butyl-do-N-(2,6-dimethylphenyl)-

(2S)-2-piperidinecarboxamide,

monohydrochloride

Synonym: (S)-(-)-Bupivacaine-d<sub>o</sub> MF: C<sub>18</sub>H<sub>19</sub>D<sub>9</sub>N<sub>2</sub>O • HCl

FW: 333.9

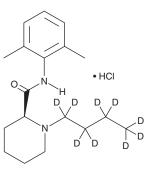
**Chemical Purity:** ≥98% (Levobupivacaine)

Deuterium

Incorporation: ≥99% deuterated forms  $(d_1-d_0)$ ; ≤1%  $d_0$ 

Supplied as: A solid -20°C Storage: Stability: ≥3 years

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



#### **Laboratory Procedures**

Levobupivacaine-do is intended for use as an internal standard for the quantification of levobupivacaine (Item No. 31596) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

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

#### 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<sub>Na</sub>) by 57.8% in isolated guinea pig ventricular myocytes when used at a concentration of 10  $\mu$ M. Levobupivacaine (10  $\mu$ M) reduces the maximal rate of depolarization (V<sub>max</sub>) and action potential duration to 76.7 and 83.4% of controls, respectively, in isolated guinea pig papillary muscle.2 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.3

#### References

- 1. Valenzuela, C., Snyders, 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).
- 3. 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.

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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### **CAYMAN CHEMICAL**

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.**CAYMANCHEM**.COM