

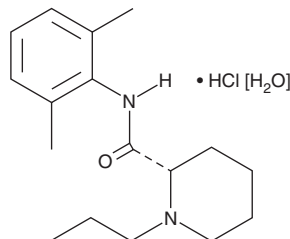
PRODUCT INFORMATION



(-)-Ropivacaine (hydrochloride hydrate)

Item No. 21422

CAS Registry No.: 132112-35-7
Formal Name: (2S)-N-(2,6-dimethylphenyl)-1-propyl-2-piperidinecarboxamide, monohydrochloride, monohydrate
Synonyms: LEA 103, (S)-Ropivacaine
MF: C₁₇H₂₆N₂O • HCl [H₂O]
FW: 328.9
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

(-)-Ropivacaine (hydrochloride hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-ropivacaine (hydrochloride hydrate) in the solvent of choice, which should be purged with an inert gas. (-)-Ropivacaine (hydrochloride hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (-)-ropivacaine (hydrochloride hydrate) in ethanol and DMF is approximately 15 mg/ml and approximately 25 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (-)-ropivacaine (hydrochloride hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (-)-ropivacaine (hydrochloride hydrate) in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(-)-Ropivacaine is a potent and reversible blocker of sodium channels in nerve fibers.¹ *In vivo*, (-)-ropivacaine induces complete impairment of proprioception, motor function, and nociception in the hindleg of rats when 100 µL of an 8 mM solution is injected percutaneously into the sciatic nerve.² (-)-Ropivacaine depresses myocardial contractile force in isolated rat hearts less potently than (±)-ropivacaine, as well as (-)- and (±)-bupivacaine (Item No. 16618).³ Formulations containing (-)-ropivacaine have been used as local anesthetics during surgery and childbirth.

References

1. Hansen, T.G. Ropivacaine: A pharmacological review. *Exp. Rev. Neurother.* **4**(5), 781-791 (2004).
2. 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).
3. Pinotti, M.F., Hepner, A., Campos, D.H., *et al.* Myocardial contractility impairment with racemic bupivacaine, non-racemic bupivacaine and ropivacaine. A comparative study. *Acta Cir. Bras.* **30**(7), 484-490 (2015).

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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