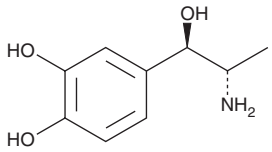
PRODUCT INFORMATION

Levonordefrin

Item No. 23993

CAS Registry No.:	829-74-3
Formal Name:	4-[(1R,2S)-2-amino-1-hydroxypropyl]-1,2-benzenediol
Synonyms:	Corbadrine, (–)-α-methyl Noradrenaline, (–)-3,4-dihydroxy Norephedrine
MF:	$C_9H_{13}NO_3$
FW:	183.2
Purity:	≥95%
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

Levonordefrin is supplied as a crystalline solid. A stock solution may be made by dissolving the levonordefrin in the solvent of choice. Levonordefrin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of levonordefrin in these solvents is approximately 30 mg/ml.

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 levonordefrin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of levonordefrin in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Levonordefrin is the (–)-enantiomer of nordefrin, a synthetic derivative of norepinephrine (Item No. 16673), that acts as a vasoconstrictor.[1] Levonordefrin (1-5 µg/kg) rapidly increases blood pressure and heart rate in anesthetized dogs and has a more potent effect on blood pressure than the dextronordefrin enantiomer.[2] It also inhibits carbamylcholine-induced uterine contractions in isolated rat uterine strips (EC_{50} = 0.0032 µg/ml). Levonordefrin (0.514 and 1.542 mg/kg), in combination with mepivacaine (Item No. 23402) and administered *via* intraoral infiltration, increases systolic arterial blood pressure in anesthetized dogs, however, the effect is not dose-dependent and the increase is not greater than 5.33%.[3] Formulations containing levonordefrin have been used in combination with local anesthetics in dentistry to prolong anesthetic effects.

References

1. Larson, P.O. Vasoconstrictors: Chemistry, mode of action, and dosage. *Anesthesia and Analgesia in Dermatologic Surgery* **42**, 29-60 (2008).
2. Luduena, F.P., Hoppe, J.O., Oyen, I.H., *et al.* Some pharmacologic properties of levo- and dextro-nordefrin. *J. Dent. Res.* **37(2)**, 206-213 (1958).
3. Simone, J.L., Tortamano, N., Armonia, P.L., *et al.* Cardiovascular alterations caused by the administration of 2% mepivacaine HCl with 1:20,000 levonordefrin (Carbocain®) in dogs. *Braz. Dent. J.* **8(2)**, 85-90 (1997).

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