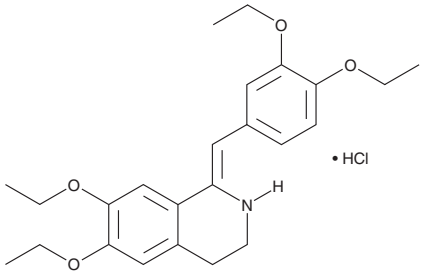
PRODUCT INFORMATION

Drotaverine (hydrochloride)

Item No. 20944

CAS Registry No.:	985-12-6
Formal Name:	1-[(3,4-diethoxyphenyl)methylene]-6,7-diethoxy-1,2,3,4-tetrahydro-isoquinoline, monohydrochloride
MF:	$C_{24}H_{31}NO_4$ • HCl
FW:	434.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 244, 305, 359 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Drotaverine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the drotaverine (hydrochloride) in the solvent of choice. Drotaverine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of drotaverine (hydrochloride) in ethanol is approximately 0.5 mg/ml and approximately 1 mg/ml in DMSO and DMF.

Drotaverine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, drotaverine (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Drotaverine (hydrochloride) has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Drotaverine is an alkaloid that has been described as an inhibitor of phosphodiesterase 4 and negative allosteric modulator of L-type Ca^{2+} channels.[1,2] Formulations containing drotaverine are used as antispasmodics to help cervical dilation in the early stages of labor.[3]

References

1. Kapui, Z., Bence, J., Boronkay, E., *et al.* Behavioural effects of selective PDE4 inhibitors in relation to inhibition of catalytic activity and competition for [3H]rolipram binding. *Neurobiology (Bp)* **7(1)**, 71-73 (1999).
2. Tömösközi, Z., Finance, O., and Arányi, P. Drotaverine interacts with the L-type Ca^{2+} channel in pregnant rat uterine membranes. *Eur. J. Pharmacol.* **449(1-2)**, 55-60 (2002).
3. Madhu, C., Mahavarkar, S., and Bhave, S. A randomised controlled study comparing drotaverine hydrochloride and valethamate bromide in the augmentation of labour. *Arch. Gynecol. Obstet.* **282(1)**, 11-15 (2010).

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