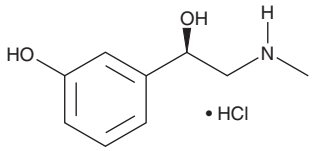
PRODUCT INFORMATION

L-Phenylephrine (hydrochloride)

Item No. 18619

CAS Registry No.:	61-76-7
Formal Name:	3-hydroxy-α-[(methylamino)methyl]-benzenemethanol, monohydrochloride
Synonym:	(R)-(–)-Phenylephrine
MF:	$C_9H_{13}NO_2$ • HCl
FW:	203.7
Purity:	≥98%
Stability:	≥2 years at -20°C
UV/Vis.:	λ_{max}: 216, 276 nm
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

L-Phenylephrine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the L-phenylephrine (hydrochloride) in the solvent of choice. L-Phenylephrine (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 L-phenylephrine (hydrochloride) in ethanol is approximately 25 mg/ml and approximately 20 mg/ml in DMF and 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 L-phenylephrine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of L-phenylephrine (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-Phenylephrine is an adrenergic α_{1A} receptor agonist (K_i = 1.4 µM) that demonstrates selectivity against the α_{1B} and α_{1C} receptor subtypes (K_is = 23.9 and 47.8 µM, respectively).[1] By stimulating adrenergic α_1 receptors, L-phenylephrine can induce aortic smooth muscle contractions, although reported relative affinity and potency values in rabbit are 5-fold weaker compared to that of L-norepinephrine (Item No. 16673).[2] This compound is frequently used to precontract smooth muscle in preparations designed to study the properties of various vasodilator agents.[3,4]

References

1. Lomasney, J.W., Cotecchia, S., Lorenz, W., *et al. M J. Biol. Chem.* **266(10)**, 6365-6369 (1991).
2. Besse, J.C. and Furchgott, R.F. *J. Pharmacol. Exp. Ther.* **197(1)**, 66-78 (1976).
3. Dogan, M., Peker, R.O., Donmez, S., *et al. Interact. Cardiovasc. Thorac. Surg.* **15(1)**, 1-4 (2012).
4. Brunsden, A.M., Brookes, S.J.H., Bardhan, K.D., *et al. Am. J. Physiol. Gastrointest. Liver Physiol.* **293(2)**, G422-G428 (2007).

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