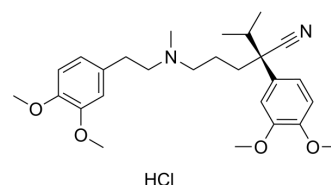


(R)-Verapamil hydrochloride

Cat. No.:	HY-135336
CAS No.:	38176-02-2
Molecular Formula:	C ₂₇ H ₃₉ ClN ₂ O ₄
Molecular Weight:	491.06
Target:	P-glycoprotein; Apoptosis
Pathway:	Membrane Transporter/Ion Channel; Apoptosis
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (203.64 mM; Need ultrasonic)
H₂O : 100 mg/mL (203.64 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.0364 mL	10.1821 mL	20.3641 mL
	5 mM	0.4073 mL	2.0364 mL	4.0728 mL
	10 mM	0.2036 mL	1.0182 mL	2.0364 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: PBS
Solubility: 50 mg/mL (101.82 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 5 mg/mL (10.18 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 5 mg/mL (10.18 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 5 mg/mL (10.18 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(R)-Verapamil hydrochloride ((R)-(+)-Verapamil hydrochloride) is a P-Glycoprotein inhibitor. (R)-Verapamil hydrochloride blocks MRP1 mediated transport, resulting in chemosensitization of MRP1-overexpressing cells to anticancer agents^{[1][2]}.

REFERENCES

[1]. Plumb JA, et al. The activity of verapamil as a resistance modifier in vitro in drug resistant human tumour cell lines is not stereospecific. *Biochem Pharmacol.* 1990 Feb 15;39(4):787-92.

[2]. Perrotton T, et al. (R)- and (S)-verapamil differentially modulate the multidrug-resistant protein MRP1. *J Biol Chem.* 2007 Oct 26;282(43):31542-8. Epub 2007 Jul 22.

Caution: Product has not been fully validated for medical applications. For research use only.

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