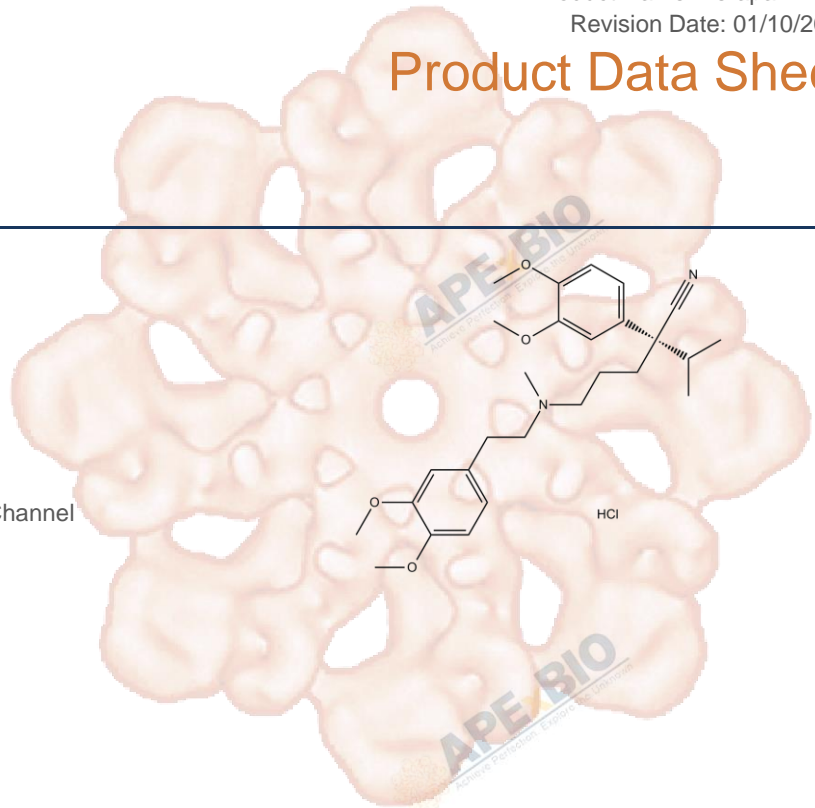


Product Data Sheet

Verapamil HCl

Cat. No.:	B1867
CAS No.:	152-11-4
Formula:	C ₂₇ H ₃₉ CIN ₂ O ₄
M.Wt:	491.06
Synonyms:	
Target:	Membrane Transporter/Ion Channel
Pathway:	Calcium Channel
Storage:	Store at -20°C



Solvent & Solubility

≥14.45 mg/mL in DMSO; ≥6.41 mg/mL in H₂O with ultrasonic; ≥8.95 mg/mL in EtOH with ultrasonic

In Vitro

Preparing Stock Solutions	Mass			
	Solvent Concentration	1mg	5mg	10mg
	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.

Biological Activity

Shortsummary

L-type calcium channel blocker

IC₅₀ & Target

Cell Viability Assay

In Vitro

Cell Line:	myeloma cell lines (JK-6L, RPMI8226, and ARH-77 cell lines)
Preparation method:	The solubility of this compound in DMSO is >14.5mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	70 μM; 16 h

	Applications:	In myeloma cell lines, the combination of bortezomib (10 nM) and verapamil (70 µM) markedly reduced the viability of the JK-6L, RPMI8226, and ARH-77 cell lines. JK-6L cells were more sensitive toward bortezomib and verapamil treatment. Combination of bortezomib and verapamil might induce predominantly apoptotic cell death and activation of caspase 3/7.
In Vivo	Animal experiment	
	Animal models:	The collagen-induced arthritis (CIA) mice model
	Dosage form:	20 mg/kg; intraperitoneally every day starting on day 21
	Applications:	In CIA mice model, verapamil remarkably attenuated development of arthritis and alleviated inflammation. Verapamil also significantly reduced mRNA levels of inflammation-associated molecules, including IL-1β, IL-6, NOS-2, and COX-2.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Li Y, Cao F, et al. "Hydroxychloroquine induced lung cancer suppression by enhancing chemo-sensitization and promoting the transition of M2-TAMs to M1-like macrophages." J Exp Clin Cancer Res. 2018 Oct 29;37(1):259.PMID:30373678

See more customer validations on www.apexbt.com.

References

[1]. Meister S1, Frey B, Lang VR, et al. Calcium channel blocker verapamil enhances endoplasmic reticulum stress and cell death induced by proteasome inhibition in myeloma cells. Neoplasia. 2010 Jul;12(7):550-61.

[2]. Wang W1, Li Z2, Meng Q3, et al. Chronic Calcium Channel Inhibitor Verapamil Antagonizes TNF-α-Mediated Inflammatory Reaction and Protects Against Inflammatory Arthritis in Mice. Inflammation. 2016 Oct;39(5):1624-34.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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