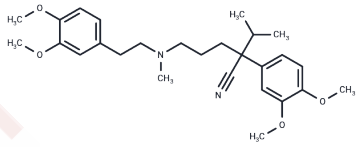
# Data Sheet (Cat.No.T20656)

TargetMol

## Verapamil

### Chemical Properties



CAS No. : 52-53-9

Formula: C27H38N2O4

Molecular Weight: 454.6

Storage: Keep away from direct sunlight
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

| | |
|---|---|
| Description | Verapamil (CP-16533-1) is a calcium channel blocker and an orally active and effective inhibitor of P-gp. Verapamil inhibits CYP3A4 and can be used in studies about the treatment of high blood pressure, heart arrhythmias, and angina research. |
| Targets(IC50) | Calcium Channel,Cytochromes P450,P-gp |
| In vitro | Verapamil inhibits the EverFluor FL Verapamil (EFV) uptake by TR-iBRB2 cells with an IC50 of 98.0 μM in a concentration-dependent manner[1]. |
| In vivo | Verapamil (1 mg/kg;i.v.) significantly decreases the incidence of ventricular arrhythmias including premature ventricular contractions (PVC), ventricular tachycardia (VT) and ventricular fibrillation (VF) for 45-min coronary artery occlusion. Total arrhythmia scores are significantly increased when the heart is subjected to ischemia. Verapamil (1 mg/kg) significantly prevents the enhancement of total arrhythmia scores induced by ischemia [3]. Verapamil(oral) is useful for the prophylaxis of atrioventricular reentry tachycardia, and also in modulating the atrioventricular nodal response in atrial fibrillation[4]. |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 45 mg/mL (98.99 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4.5 mg/mL (9.9 mM),Solution.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.1997 mL | 10.9987 mL | 21.9974 mL |
| 5 mM | 0.4399 mL | 2.1997 mL | 4.3995 mL |
| 10 mM | 0.220 mL | 1.0999 mL | 2.1997 mL |
| 50 mM | 0.044 mL | 0.220 mL | 0.4399 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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