

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@hellobio.com



## DATASHEET

Verapamil hydrochloride

### Product overview

<b>Name</b>	Verapamil hydrochloride
<b>Cat No</b>	HB1237
<b>Biological action</b>	Blocker
<b>Purity</b>	>99%
<b>Description</b>	L-type Ca <sup>2+</sup> channel blocker

### Biological Data

**Biological description** L-type Ca<sup>2+</sup> channel blocker and adrenergic antagonist.

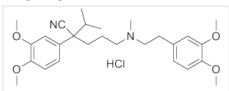
Shows various biological actions - increases FRZB expression and decreases Wnt/ $\beta$ -catenin signalling in osteoarthritis and shows cardioprotective, vasodilator, anti-arrhythmic, anti-oxidative stress actions.

Recently investigated as part of COVID-19 compound repurposing.

### Solubility & Handling

<b>Storage instructions</b>	Room temperature
<b>Solubility overview</b>	Soluble in water (50mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Chemical name</b>	$\alpha$ -[3-[[2-(3,4-Dimethoxyphenyl)ethyl]methylamino]propyl]-3,4-dimethoxy- $\alpha$ -(1-methylethyl) benzeneacetonitrile hydrochloride
<b>Molecular Weight</b>	491.07
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>27</sub> H <sub>38</sub> N <sub>2</sub> O <sub>4</sub> ·HCl
<b>CAS Number</b>	152-11-4
<b>PubChem identifier</b>	62969
<b>SMILES</b>	CC(C)C(CCCN(C)CCC1=CC(=C(C=C1)OC)OC)(C#N)C2=CC(=C(C=C2)OC)OC.Cl
<b>InChi</b>	InChI=1S/C27H38N2O4.ClH/c1-20(2)27(19-28,22-10-12-24(31-5)26(18-22)33-7)14-8-15-29(3)16-13-21-9-11-23(30-4)25(17-21)32-6;/h9-12,17-18,20H,8,13-16H2,1-7H3;1H
<b>InChiKey</b>	DOQPXTMNIUCOSY-UHFFFAOYSA-N
<b>MDL number</b>	MFCD00055208

### References

Comparative study of the effect of verapamil and vitamin D on iron overload-induced oxidative stress and cardiac structural changes in adult male rats.

Abd Allah ES *et al* (2014) Pathophysiology  
**PubMedID** [25092628](#)

**Verapamil protects against cartilage degradation in osteoarthritis by inhibiting Wnt/ $\beta$ -catenin signaling.**

Takamatsu A *et al* (2014) PLoS One 9(3)  
**PubMedID** [24658359](#)

**Robust anti-arrhythmic efficacy of verapamil and flunarizine against dofetilide-induced TdP arrhythmias is based upon a shared and a different mode of action.**

Oros A *et al* (2010) Br J Pharmacol 161(1)  
**PubMedID** [20718748](#)

**A SARS-CoV-2 protein interaction map reveals targets for drug repurposing**

Krogan *et al* (2020) Nature 7816  
**PubMedID** [32353859](#)

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