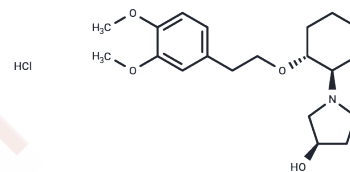


Vernakalant Hydrochloride

Chemical Properties

CAS No. :	748810-28-8
Formula:	C ₂₀ H ₃₂ ClNO ₄
Molecular Weight:	385.93
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Vernakalant Hydrochloride (RSD1235 hydrochloride) is a mixed voltage- and frequency-dependent Na ⁺ and atria-preferred K ⁺ channel blocker.
Targets(IC50)	Potassium Channel,Sodium Channel
In vitro	Block of Kv1.5 by Vernakalant Hydrochloride occurs after channel activation, as Vernakalant induces a rapid block of channel current upon depolarization with minimal resting or "tonic" block. The most significant effect is the reduction in potency at I502A, with an IC ₅₀ of 329±19 μM (n=4-10) compared to a control IC ₅₀ of 13.4±0.9 μM (n=5-23), reflecting a 25-fold potency decrease. Lesser reductions in potency, between 3- and 4-fold, were noted for V505A, I508A, T480A, and C500A. For wild-type and mutant Kv1.5 channels, IC ₅₀ for Vernakalant block are 13.35±0.93 μM, 0.61±0.03 μM, and 1.63±0.09 μM for Kv1.5 channels, Kv1.5 channelI508F, and Kv1.5 channelT479A, respectively [1].

Solubility Information

Solubility	DMSO: 45 mg/mL (116.6 mM),Sonication is recommended. H ₂ O: 45 mg/mL (116.6 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.18 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5911 mL	12.9557 mL	25.9114 mL
5 mM	0.5182 mL	2.5911 mL	5.1823 mL
10 mM	0.2591 mL	1.2956 mL	2.5911 mL
50 mM	0.0518 mL	0.2591 mL	0.5182 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

Eldstrom J, et al. The molecular basis of high-affinity binding of the antiarrhythmic compound Vernakalant (RSD1235) to Kv1.5 channels. *Mol Pharmacol.* 2007 Dec;72(6):1522-34.

Chiba T, et al. Influences of rapid pacing-induced electrical remodeling on pharmacological manipulation of the atrial refractoriness in rabbits. *J Pharmacol Sci.* 2016 Mar;130(3):170-6.

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