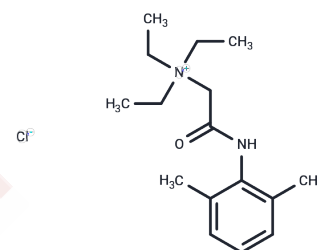


## QX-314 chloride

## Chemical Properties

CAS No. :	5369-03-9
Formula:	C <sub>16</sub> H <sub>27</sub> ClN <sub>2</sub> O
Molecular Weight:	298.85
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	QX-314 chloride is a membrane-impermeable, permanently charged blocker of the sodium channel.
Targets(IC50)	Sodium Channel
In vitro	QX-314 chloride (1–60 mM) directly activates TRPV1 in a concentration-dependent manner. QX-314 chloride exerts biphasic effects on transient receptor potential vanilloid subtype 1 channels (TRPV1) in vitro. QX-314 chloride (10 mM) inhibits calcium currents in hippocampal CA1 pyramidal neurons intracellular, and the low-threshold (T-type) Ca <sup>2+</sup> currents are on average < 45% of control amplitude[2].

## Solubility Information

Solubility	DMSO: 26.3 mg/mL (88 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 2.63 mg/mL (8.8 mM), Solution. <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

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	1mg	5mg	10mg
1 mM	3.3462 mL	16.7308 mL	33.4616 mL
5 mM	0.6692 mL	3.3462 mL	6.6923 mL
10 mM	0.3346 mL	1.6731 mL	3.3462 mL
50 mM	0.0669 mL	0.3346 mL	0.6692 mL

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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

Rivera-Acevedo RE, et al. The quaternary lidocaine derivative, QX-314, exerts biphasic effects on transient receptor potential vanilloid subtype 1 channels in vitro. *Anesthesiology*. 2011 Jun;114(6):1425-34.

Talbot MJ, et al. Intracellular QX-314 inhibits calcium currents in hippocampal CA1 pyramidal neurons. *J Neurophysiol*. 1996 Sep;76(3):2120-4.

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