

Huwentoxin-IV

Chemical Properties

CAS No. :	526224-73-7
Formula:	C174H278N52O51S6
Molecular Weight:	4106.79
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

ECLEIFKACNPSNDQCCKSSKLVCSRKTRWCKYQI-NH₂
(Disulfide bridge:Cys₂-Cys₁₇;Cys₅₃-Cys₂₄;Cys₁₆-Cys₃₁)

Biological Description

Description	Selective NaV1.7 channel blocker. Preferentially inhibits neuronal NaV1.7, 1.2 and 1.3 (IC ₅₀ values are 26, 150 and 338 nM respectively), compared to muscle subtypes NaV1.4 and 1.5 (IC ₅₀ = >10 μM). Inhibits the channel by binding at the neurotoxin receptor site 4 in the S3-S4 linker of domain II, trapping the voltage sensor in the inward, closed configuration.
Targets(IC ₅₀)	Sodium Channel

Solubility Information

Solubility	H ₂ O: 1 mg/mL (0.24 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.2435 mL	1.2175 mL	2.435 mL
5 mM	0.0487 mL	0.2435 mL	0.487 mL
10 mM	0.0243 mL	0.1217 mL	0.2435 mL
50 mM	0.0049 mL	0.0243 mL	0.0487 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

Xiao et al (2008) Tarantula huwentoxin-IV inhibits neuronal sodium channels by binding to receptor site 4 and trapping the domain II voltage sensor in the closed configuration. J.Biol.Chem. 283 27300 PMID:

Xiao et al (2011) Common molecular determinants of tarantula huwentoxin-IV inhibition of Na⁺ channel voltage sensors in domains II and IV. J.Biol.Chem. 286 27301 PMID:

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