

ω-agatoxin IVA

Product name : ω-agatoxin IVA	Synonyms : ω-aga IVA
Catalog # : 11AGA001	
Product description ω-agatoxin IVA is a peptide originally isolated from funnel web spider venom <i>Agelenopsis</i> . This peptide is a specific blocker of P/Q-type calcium channel (Cav2.1).	
Product specifications AA sequence: Lys-Lys-Lys-Cys ⁴ -Ile-Ala-Lys-Asp-Tyr-Gly-Arg-Cys ¹² -Lys-Trp-Gly-Gly-Thr-Pro-Cys ¹⁹ -Cys ²⁰ -Arg-Gly-Arg-Gly-Cys ²⁵ -Ile-Cys ²⁷ -Ser-Ile-Met-Gly-Thr-Asn-Cys ³⁴ -Glu-Cys ³⁶ -Lys-Pro-Arg-Leu-Ile-Met-Glu-Gly-Leu-Gly-Leu-Ala-OH Disulfide bonds Cys ⁴ -Cys ²⁰ , Cys ¹² -Cys ²⁵ , Cys ¹⁹ -Cys ³⁶ and Cys ²⁷ -Cys ³⁴ Length (aa): 48 Formula: C ₂₁₇ H ₃₆₀ N ₆₈ O ₆₀ S ₁₀ Appearance: White lyophilized solid Molecular Weight: 5202.48 Da CAS number: 145017-83-0 Source: Synthetic Counterion: TFA salts Solubility: Water or saline buffer, 5 mg/mL maximum (recommendation)	
Formulation Storage/Stability: Shipped at ambient temperature under lyophilized powder. Store at -20°C (-4°F). Do not freeze-thaw. Aliquot sample if required and store at -80°C (-112°F). Expiry date: One year Use restrictions: For laboratory use only. Not for drug, household or other uses. Not for use in diagnostic or therapeutic procedures.	
Related products <ul style="list-style-type: none"> • ω-conotoxin MVIIA - #08CON001: Ca_v2.2 inhibitor • ω-conotoxin MVIIC - #08CON002: N, P and Q type calcium channels • ω-conotoxin GVIA - #08CON003: Ca_v2.2 inhibitor • ω-conotoxin SO3 - #08CON013: selective N-type voltage-sensitive calcium channels blocker • SNX482 - #08SNX001: selective blocker of R-type voltage-sensitive calcium channels (Ca_v2.3) 	
References <ul style="list-style-type: none"> • Mintz I.M., <i>et al.</i> (1992) P-type calcium channels blocked by the spider toxin omega-Aga-IVA. <i>Nature</i>. • Bourinet E, <i>et al.</i> (1999) Splicing of alpha 1A subunit gene generates phenotypic variants of P- and Q-type calcium channels. <i>Nat Neurosci</i>. • Adams ME. (2004) Agatoxins: ion channel specific toxins from the American funnel web spider, <i>Agelenopsis aperta</i>. <i>Toxicon</i>. • Doering CJ, Zamponi GW. (2003) Molecular pharmacology of high voltage-activated calcium channels. <i>J Bioenerg Biomembr</i>. • Winterfield JR, Swartz KJ. (2000) A hot spot for the interaction of gating modifier toxins with voltage-dependent ion channels. <i>J Gen Physiol</i>. • King GF. (2007) Modulation of insect Ca(v) channels by peptidic spider toxins. <i>Toxicon</i>. • Wicher D, Penzlin H. (1998) omega-Toxins affect Na⁺ currents in neurosecretory insect neurons. <i>Receptors Channels</i>. • Wicher D, Penzlin H. (1997) Ca²⁺ currents in central insect neurons: electrophysiological and pharmacological properties. <i>J Neurophysiol</i>. 	

For laboratory research use only