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PRODUCT # A-500
LOT # AG-10

CERTIFICATE OF ANALYSIS

ω -Agatoxin IVA (*Agelenopsis aperta*)

M.W.: 5202 daltons.¹
Sequence: KKKCI AKDYG RCKWG GTPCC RGRGC ICSIM GTNCE CKPRL IMEGL GLA
Purity: > 99% by HPLC.
Solubility: Any aqueous solution.

Concentration and Dissolution:

Each vial contains 5 μ g of unbuffered protein and is provided as a lyophilized powder.

ω -Agatoxin IVA can be dissolved in distilled water or saline (0.9% NaCl). Dissolving 5 μ g at 1 ml gives a stock solution of 1 μ M.

Storage and Stability:

Lyophilized form: 2-3 weeks at room temperature.
One year at -20° C.

Liquid form: Up to one week at 4° C.
Three months at -20° C.

Known action:

ω -Agatoxin IVA was shown to be a selective blocker of Ca_v2.1 (P/Q type) channels.¹ However, the sensitivity of block depends on the auxiliary β subunit isoform² and on the splice variant³. Therefore the effective concentrations of block vary between systems. In accordance the toxin blocks presynaptic calcium currents and synaptic transmission in a variety of synapses^{4,5}.

Bioassay:

ω -Agatoxin IVA is widely used in electrophysiological measurements of cloned and native channels^{6,7}. It is used to assess the role of Ca_v2.1 channels in synaptic transmission (see ⁴). In addition it was used to map the spatial distribution of Ca_v2.1 channels in mouse cerebellar and hippocampal brain slices.⁸

References:

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