



**alomone labs**

Molecular Tools for the Neuroscience Community

**DATA SHEETS**

**Certificate of Analysis**

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**PRODUCT # A-530**

**LOT # AG-10, AG-11**

**CERTIFICATE OF ANALYSIS**

**$\omega$ -Agatoxin TK**  
(*Agelenopsis Aperta*)

**M.W.:** 5273 daltons.

**Sequence:** EDNCI AEDYG KCTWG GTKCC RGRPC RCSMI GTNCE  
CTPRL IMEGL SFA

**Purity:** > 99% by HPLC.

**Solubility:** Any aqueous solution.

**Concentration and Dissolution:**

Each vial contains 5  $\mu$ g of unbuffered protein and is provided as a lyophilized powder.  
 $\omega$ -Agatoxin TK can be dissolved in distilled water or saline (0.9% NaCl). Dissolving 5  $\mu$ g at 1 ml, gives a stock solution of 1  $\mu$ 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:**

$\omega$ -Agatoxin TK was shown to be a selective and reversible blocker of Cav2.1 (P/Q type) channels. <sup>1</sup>

**Bioassay:**

By using the patch clamp technique,  $\omega$ -Agatoxin TK was shown to block several types of Cav2.1 derived currents (i.e. P and Q with differential inactivation kinetics) in rat cerebral cortex<sup>2</sup> and hippocampal<sup>3</sup> neurons. In accordance the toxin blocks synaptic transmission as was shown in the corticostriatal of the rat brain with IC<sub>50</sub> of 127nM.<sup>4</sup>

**References:**

1. Teramoto, T. *et al.* (1993) *Biochem. Biophys. Res. Commun.* **196**, 134.
2. Teramoto, T. *et al.* (1997) *Brain Res.* **756**, 225.
3. Teramoto, T. *et al.* (1995) *Neuroreport* **6**, 1684.
4. Barral, J. *et al.* (2001) *Eur. J. Pharmacol.* **430**, 167.