



**alomone labs**

Molecular Tools for the Neuroscience Community

**DATA SHEETS**

Certificate of Analysis

**Headquarters:** Alomone Labs Ltd. Har Hotzvim Hi-Tech Park P.O. Box 4287, Jerusalem 91042, Israel.

Tel: +972-2-587 2202 Fax: +972-2-587 1101 or +972-2-642 6975 email: [alomone@netvision.net.il](mailto:alomone@netvision.net.il) <http://www.alomone.com>

**PRODUCT # C-500**

**LOT # CS-08**

## CERTIFICATE OF ANALYSIS

### Calciseptine

*(Dendroaspis p. polylepsis)*

**M.W.:** 7036 daltons.<sup>1</sup>

**Sequence:** RICYI HKASL PRATK TCVEN TCYKM FIRTQ REYIS ERGCG CPTAM WPYQT  
ECCKG DRCNK

**Purity:** > 98% by HPLC.

**Solubility:** Any aqueous buffer.

#### Preparation:

Calciseptine is isolated from *Dendroaspis p. polylepsis* snake venom, by modification of the procedure of Schweitz<sup>1</sup> and purified to homogeneity.

#### Reconstitution:

The peptide concentration and identification were determined by amino acid analysis. Each vial contains 70 µg of unbuffered protein. Dissolving of 70 µg in 10ml of any conventional buffer gives a stock solution of 1µM.

Before dissolving the toxin, the tube should first be centrifuged, to concentrate the lyophilized toxin in the bottom of the tube. After centrifuging, the toxin must be dissolved into a stock solution using distilled water, or an appropriate buffer (see below), to a concentration of 10<sup>-5</sup>-10<sup>-6</sup>M. After preparing the stock solution, it should be divided into aliquots and can be stored this way for up to three months at -20°C.

#### Storage and Stability:

Lyophilized form: 2-3 weeks at room temperature.

One year at -20° C.

Liquid form: Up to two weeks at 4° C.

Three months at -20° C.



**Headquarters:** Alomone Labs Ltd. Har Hotzvim Hi-Tech Park P.O. Box 4287, Jerusalem 91042, Israel.

Tel: +972-2-587 2202 Fax: +972-2-587 1101 or +972-2-642 6975 email: [alomone@netvision.net.il](mailto:alomone@netvision.net.il) <http://www.alomone.com>

## PRODUCT # C-500

### Known action:

Calciseptine was shown to be a specific L-type  $Ca_v$  channel blocker<sup>2</sup>. In contrast, it increases L-type currents in skeletal muscle<sup>3</sup>.

### Bioassay:

The activity of this lot was tested to confirm its ability to block spontaneous or  $K^+$ -induced contraction of cardiac and smooth muscle cells<sup>2</sup>. Using patch clamp it was also shown to block specifically L-type  $Ca_v$  channel current in neuronal cells in culture<sup>2</sup>. For these variety of effects  $IC_{50}$  were in the range 15-500 nM. Using the outside-out configuration of patch clamp, it was shown to reduce single L-type channels open probability and availability as recorded from Guinea pig portal vein<sup>4</sup>.

### Reference:

1. Schweitz, H. *et al.* (1990) *Toxicol* **28**, 847.
2. De Weille, J. R. *et al.* (1991) *P. N. A. S.* **88**, 2437.
3. Garcia, M. C. *et al.* (2001) *J. Membr. Biol.* **184(2)**, 121.
4. Teramoto, N. *et al.* (1996) *Pflugers Arch.* **432(3)**, 462.