



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: techsupport@alomone.com http://www.alomone.com

Molecular Tools for the Life Science Community

Certificate of Analysis

Slotoxin

(K⁺ channel toxin α -KTx 1.11, SloTx)

Cat. #: RTS-410

Origin: *Centruroides noxius* (Mexican scorpion).

Source description: Recombinant, *E. coli*.

M.W.: 4086 daltons.

Purity: >98%.

Effective concentration: 10-100 nM.

Sequence: TFIDVDCTVSKECWAPCKAAFGVDRGKCMGKKCKCYV.

Modifications: Disulfide bonds between Cys⁷-Cys²⁸, Cys¹³-Cys³³, and Cys¹⁷-Cys³⁵.

Molecular formula: C₁₇₇H₂₈₁N₄₇O₅₀S₇.

CAS No.: 401470-29-9.

Activity: Slotoxin inhibits the Maxi K⁺ (BK_{Ca} or mSlo, KCNMA1, K_{Ca}1.1) channels¹. Slotoxin blocks differentially channels formed by the α 1 subunit alone and channels formed by the α 1 combined with auxiliary β subunits.

Bioassay: Slotoxin inhibits mSlo channels heterologously expressed in *Xenopus* oocytes.

Sizes: 5 μ g, 5 x 5 μ g, 10 μ g, 5 x 10 μ g, or 0.1 mg lyophilized powder.

Storage before reconstitution: Lyophilized powder can be stored intact at room temperature for several weeks. For longer periods, it should be stored at -20°C.

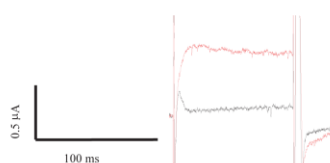
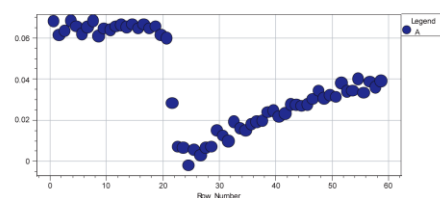
Reconstitution: Any aqueous buffer. Centrifuge all product preparations before use (10000 x g 5 min).

Concentration after reconstitution: Dissolving 10 μ g in 0.245 ml gives a stock solution of 10 μ M.

Storage and stability after reconstitution: Up to one week at 4°C or three months at -20°C.

References:

1. Garcia-Valdes, J. *et al.* (1998) *FEBS Lett.* **505**, 369.



Left: Time course of current amplitude changes upon application of 100 nM **Slotoxin** (#RTS-410), (bars represent the time of toxin perfusion).
Right: An example of current response to 100 ms depolarization to +20 mV (from a holding potential of -100 mV) before, (red) and during (black) perfusion of 100 nM Slotoxin.

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