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Product #I-300

LOT# IM-01

CERTIFICATE OF ANALYSIS

Imperatoxin A

(Pandinus imperator)¹

M.W.: 3758 daltons.

Purity: Greater than 99% by HPLC

Concentration and Dissolution:

Each vial contains 5 µg of unbuffered protein and is provided as a lyophilized powder. Imperatoxin A can be dissolved in distilled water or saline (0.9% NaCl).

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:

Imperatoxin A is an activator of the Ryanodin receptor channel (RyR). ¹

Bioassay:

Imperatoxin A stimulates [³H]ryanodine binding in skeletal but not cardiac sarcoplasmic reticulum with an ED₅₀ of ~6 nM, and activates skeletal but not cardiac Ca²⁺-release channels. ¹ Imperatoxin A increased the open probability (P_o) of rabbit skeletal muscle RyRs by increasing the frequency of open events and decreasing the duration of the closed lifetimes. This activating effect was dose-dependent (ED₅₀ = 10 nM), had a fast onset, and was fully reversible. ²

References:

1. Valdivia, H.H. *et al.* (1992) *P.N.A.S. USA* **89**, 12185.
2. El-Hayek, R. *et al.* (1995) *J. Biol. Chem.* **270**, 28696.