



# TOXIVEN BIOTECH PRIVATE LIMITED

**Target:** Amyotrophic Lateral Sclerosis –Motor Neuron Disease

**Format:** Targeted Venom Discovery Array

**Code:** T-VDA<sup>ALS</sup>

## Product Description

The **Amyotrophic Lateral Sclerosis (ALS) Targeted Venom Discovery Array™ (T-VDA<sup>ALS</sup>)** is specifically designed to maximise discovery of new tools. One of the key pathologies seen in ALS muscular degeneration is excess calcium (Ca<sup>2+</sup>). Ca<sup>2+</sup> channels are, therefore, important drug targets for this **neurological disorder**. Venoms from theraphosids (tarantulas), scorpions and snakes are rich sources of new Ca<sup>2+</sup> channel tools. The ALS targeted array contains pure venom fractions from 12, 24, 48 or 96 species **optimised for identification of novel tools**. Each array contains characterised venoms active on calcium channels from the literature to act as positive controls. The control venoms for T-VDA<sup>Ca2+</sup> include *Parabuthus transvaalicus* (South African fattail scorpion), which contains **Kurtoxin** with broad spectrum calcium channel activity L,T,N and P type channels<sup>1</sup>; *Dendroaspis angusticeps* (Eastern green mamba) venom which contains **Calcicludine**, a potent L-type calcium channel blocker<sup>2</sup>; and *Hysteroocrates gigas* (Cameroon red baboon tarantula) venom which blocks N and E type calcium currents<sup>3</sup>. With a special focus on *Grammastola* species, other venom fractions making up the library have been specially selected by our drug discovery scientists to maximise novel hit potential.

- Venoms are supplied lyophilised in Echo<sup>®</sup> qualified acoustic source plates (Labcyte Inc) and are useable on any SBS footprint liquid handling device or by hand.
- 384-well format has 200ng venom fraction per well, suggested dilution 20µl as hit fractions are typically active at 5µg/ml and below.
- 1536-well format also available.

1. Chuang R.S.I., Jaffe H., Cribbs L., Perez-Reyes E., Swartz K.(1998).Inhibition of T-type voltage-gated calcium channels by a new scorpion toxin. J.Nat. Neurosci. 1:668-6742.
2. Schweitz H., Heurteaux C., Bois P., Moinier D., Romey G., Lazdunski M.(1994).Calcicludine, a venom peptide of the Kunitz-type protease inhibitor family, is a potent blocker of high-threshold Ca<sup>2+</sup> channels with a high affinity for L-type channels in cerebellar granule neurons. Proc. Natl. Acad. Sci. U.S.A. 91:878-8823.
3. Newcomb R., Szoke B., Palma A., Wang G., Chen X.H., Hopkins W., Cong R., Miller J., Urge L., Tarczy-Hornoch K., Loo J.A., Dooley D.J., Nadasdi L., Tsien R.W., Lemos J., Miljanich G.(1998).

Selective peptide antagonist of the class E calcium channel from the venom of the tarantula *Hysteroocrates gigas*. Biochemistry 37:15353-1536

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