

Target: Antimicrobial – bacteria, fungi and parasites
Format: Targeted Venom Discovery Array

Code: T-VDA^{Microbe}

Product Description

With antibiotic resistance a significant global threat, venoms are proving a rich source of new molecules. The antimicrobial Targeted Venom Discovery Array (T-VDA™) is specifically designed to maximise discovery of new tools. **Novel antimicrobial peptides and proteins** have been found in venoms from snakes, spiders and scorpions. These targeted arrays contain pure venom fractions from 12, 24, 48 or 96 species optimised for identification of novel antimicrobials. Each array contains characterised venoms **active on microbial growth and survival** from the literature to act as positive controls. The control venoms for T-VDA^{microbe} include *Naja kaouthia* (monocled cobra) as well as many other snake venom proteins such as **phospholipase A2** and **L amino acid oxidase**, which have been shown to be **bacteriocidal**¹; *Pandinus imperator* (emperor scorpion) where several antimicrobial peptides have been discovered²; and *Psalmopoeus cambridgei* (Trinidad chevron tarantula) where **antiplasmodial ICK peptides** have been discovered³. The other venom fractions making up the library have been specially selected by our drug discovery scientists to maximise the novel hit potential.

- Venoms are supplied lyophilised in Echo[®] qualified acoustic source plates (Labcyte Inc) and are useable on any SBS footprint liquid handling device or by hand.
- 384-well format has 1µg venom fraction per well, re-suspension with 30µl will produce ~1.6µM-16µM stock concentration of peptides.
- 1536-well format has 300ng venom fraction per well, re-suspension with 10µl will produce ~1.5µM-15µM stock concentration of peptides.

1. Samy RP, Stiles BG, Gopalakrishnakone P, Chow VT. (2011). Antimicrobial proteins from snake venoms: direct bacterial damage and activation of innate immunity against *Staphylococcus aureus* skin infection. *Curr. Med. Chem.* 18(33):5104-13
2. Zeng XC, Zhou L, Shi W, Luo X, Zhang L, Nie Y, Wang J, Wu S, Cao B, Cao H. (2013). Three new antimicrobial peptides from the scorpion *Pandinus imperator*. *Peptides.* 45C:28-34
3. Choi S.-J., Parent R., Guillaume C., Deregnacourt C., Delarbre C., Ojcius D.M., Montagne J.-J., Celerier M.-L., Phelipot A., Amiche M., Molgo J., Camadro J.-M., Guette C. (2004). Isolation and characterization of Psalmopeotoxin I and II: two novel antimalarial peptides from the venom of the tarantula *Psalmopoeus cambridgei*. *FEBS Lett.* 572:109-117

Data compiled from UniProt: Reorganizing the protein space at the Universal Protein Resource (UniProt), *Nucleic Acids Res.* 40: D71-D75 (2012).

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