VENOMTECH®
Drug Discovery Solutions™

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| Target: | Sodium Channels |
| Format: | Targeted Venom Discovery Array |
| Code: | T-VDA$^{Na+}$ |

## Product Description

The sodium ($Na^+$) channel Targeted Venom Discovery Array™ (T-VDA$^{Na+}$) is specifically designed to maximise discovery of new tools. $Na^+$ channels are important drug targets for a range of neurological disorders, specifically pain. Venoms from theraphosids (tarantulas), scorpions and snakes are rich sources of new $Na^+$ tools. These targeted arrays contain pure venom fractions from 12, 24, 48 or 96 species optimised for identification of novel tools. Each array contains characterised venoms active on sodium channels from the literature to act as positive controls. The control venoms for T-VDA$^{Na+}$ include *Thrixopelma puriens* (Peruvian velvet tarantula) where Protox II, a gating modifier of NaV1.7[1], was discovered; *Androctonus australis* (Sahara scorpion) where several selective sodium channel tools have been discovered[2]; and *Crotalus durissus* (South American rattlesnake) venom which contains crotamine[3], one of the very few snake-derived $Na^+$ channel toxins. The 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® 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. Priest B.T., Blumenthal K.M., Smith J.J., Warren V.A., Smith M.M. (2007). ProTx-I and ProTx-II: gating modifiers of voltage-gated sodium channels. Toxicon, 49:194-201
2. Loret E.P., Martin-Eauclaire M.-F., Mansuelle P., Sampieri F., Granier C., Rochat H. (1991). An anti-insect toxin purified from the scorpion *Androctonus australis hector* also acts on the alpha- and beta-sites of the mammalian sodium channel: sequence and circular dichroism study. Biochemistry 30:633-640.
3. Mancin A.C., Soares A.M., Andriao-Escarso S.H., Faca V.M., Greene L.J., Zuccolotto S., Pela I.R., Giglio J.R. (1998). The analgesic activity of crotamine, a neurotoxin from *Crotalus durissus terrificus* (South American rattlesnake) venom: a biochemical and pharmacological study. Toxicon, 36:1927-1937


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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