VENOMTECH®
Venom Research Solutions™

Target:	G-protein coupled receptors
Format:	Targeted Venom Discovery Array
Code:	T-VDA^{GPCR}

Product Description

Although not typically expected as a pathway for venoms, GPCR modulation has been discovered in several snake venoms including muscarinic acetylcholine receptor blockers. Snake venoms are a rich source of GPCR tools such as the three-finger toxin motif that is particularly effective at binding GPCRs. 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 in GPCR pathways from the literature to act as positive controls. The control venoms for T-VDA^{GPCR} include *Crotalus atrox* (western diamondback rattlesnake) where the bradykinin B2 receptor antagonist has been discovered[1]; *Dendroaspis angusticeps* (eastern green mamba) where several novel muscarinic receptor antagonists have been discovered[2]; and *Naja kaouthia* (monocled cobra) venom which contains a large abundance of three-finger proteins including antagonising nicotinic and muscarinic nicotine receptors[3]. 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. Calvete J.J., Fasoli E., Sanz L., Boschetti E., Righetti P.G. (2009). Exploring the venom proteome of the western diamondback rattlesnake, *Crotalus atrox*, via snake venomics and combinatorial peptide ligand library approaches. J. Proteome Res. 8:3055-3067
2. Max S.I., Liang J.-S., Potter L.T. (1993). Purification and properties of m1-toxin, a specific antagonist of m1 muscarinic receptors. J. Neurosci. 13:4293-4300
3. Utkin Y.N., Kukhtina V.V., Kryukova E.V., Chiodini F., Bertrand D., Methfessel C., Tsetlin V.I. (2001). 'Weak toxin' from *Naja kaouthia* is a nontoxic antagonist of alpha 7 and muscle-type nicotinic acetylcholine receptors. J. Biol. Chem. 276:15810-15815

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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