VENOMTECH®
Drug Discovery Solutions™

Target:	**Enzymes and Inhibitors**
Format:	**Targeted Venom Discovery Array**
Code:	**T-VDA^{Enz}**

Product Description

Enzymes are incredibly useful tools in a wide range of disciplines and industrial processes. Snake venoms are a rich source of enzymes such as phospholipases (PLA2), snake venom metalloproteinase (SVMP), phosphodiesterases, L-amino-acid oxidase (LAO) and many more. Moreover, invertebrate venoms also often contain enzymes such as phospholipase. Along with useful enzymes, venoms contain many **enzyme inhibitors** of pharmaceutical utility. 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 analgesic pathways** from the literature to act as positive controls. The control venoms for T-VDA^{Enz} include phospholipase A2-containing *Naja nigricollis* venom (black-necked spitting cobra)[1]; *Deinagkistrodon acutus* (hundred pace pit viper) which contains an **L-amino-acid oxidase enzyme** that **induces apoptosis in HeLa cancer cells**[2]; and *Crotalus adamanteus* (Eastern diamondback rattlesnake) venom which contains **snake venom metalloproteinases** such as Adamalysin[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 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. Stefansson S., Kini R.M., Evans H.J. (1990). The basic phospholipase A2 from *Naja nigricollis* venom inhibits the prothrombinase complex by a novel nonenzymatic mechanism. Biochemistry 29:7742-7746
2. Zhang L., Wei L. (2007). ACTX-8, a cytotoxic L-amino acid oxidase isolated from *Deinagkistrodon acutus* snake venom, induces apoptosis in Hela cervical cancer cells. J. Life Sci. 80:1189-1197
3. Gomis-Rueth F.-X., Meyer E.F., Kress L.F., Politi V. (1998). Structures of adamalysin II with peptidic inhibitors. Implications for the design of tumor necrosis factor alpha convertase inhibitors. Protein Sci. 7:283-292

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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