

Target: Oncology
Format: Targeted Venom Discovery Array

Code: T-VDA^{oncol}

Product Description

Venoms are a proven therapeutic resource with several drugs in development for cancer therapeutics such as **antimetastatics** and **tumour cell apoptosis**. Snake venoms are rich source of new oncology tools including disintegrins, L-amino-acid oxidase and a wealth of signalling peptides. 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^{oncol} include *Agkistrodon contortrix* (Southern copperhead) where the disintegrin **Contortrostatin** was discovered¹; *Deinagkistrodon acutus* (hundred pace pit viper) which contains an L-amino_{acid} oxidase enzyme that induces apoptosis in HeLa cancer cells²; and *Leiurus quinquestriatus* (death stalker scorpion) venom which contains small neurotoxic peptides that block chloride channels and can label gliomas³. 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. Zhou Q., Hu P., Ritter M.R., Swenson S.D., Argounova S., Epstein A.L., Markland F.S. Arch. (2000). Molecular cloning and functional expression of contortrostatin, a homodimeric disintegrin from southern copperhead snake venom. Biochem. Biophys. 375:278-288
2. Zhang L. & Wei L.J. (2007) ACTX-8, a cytotoxic L-amino acid oxidase isolated from Agkistrodon acutus snake venom, induces apoptosis in Hela cervical cancer cells. Life Sci. 80:1189-1197
3. Soroceanu L., Gillespie Y., Khazaeli M.B., Sontheimer H. (1998). Use of chlorotoxin for targeting of primary brain tumors. Cancer Res. 58:4871-4879

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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