

---

**c l e i n f o**

---

**Article history:**

Received 30 November 2013

Received in revised form 28 February 2014

Accepted 28 February 2014

Available online 13 March 2014

---

**Keywords:**

BPTI

Russell's Viper

Trypsin inhibitor

Thrombin inhibitor

Anticoagulant

Anti-plasmin

---

**a b s t r a c t**

---

The snake venom may be considered as a potent source of untapped therapeutic proteins and peptides. The peptide mass fingerprinting and N-terminal sequence alignment of a 6.9 kDa peptide named Rusvikunin from *Daboia russelii russelii* venom show the presence of putative conserved domains of the KU superfamily. Further, BLAST analysis of two of the de novo peptide sequences of Rusvikunin demonstrates significant sequence homology with serine proteases reported in the NCBI database. Rusvikunin possesses conserved



(5  $\mu$ mol/l trypsin or Russelobin; 0.5  $\mu$ mol/l plasmin, thrombin or t-PA; 0.15  $\mu$ mol/l FXa) was pre-incubated with



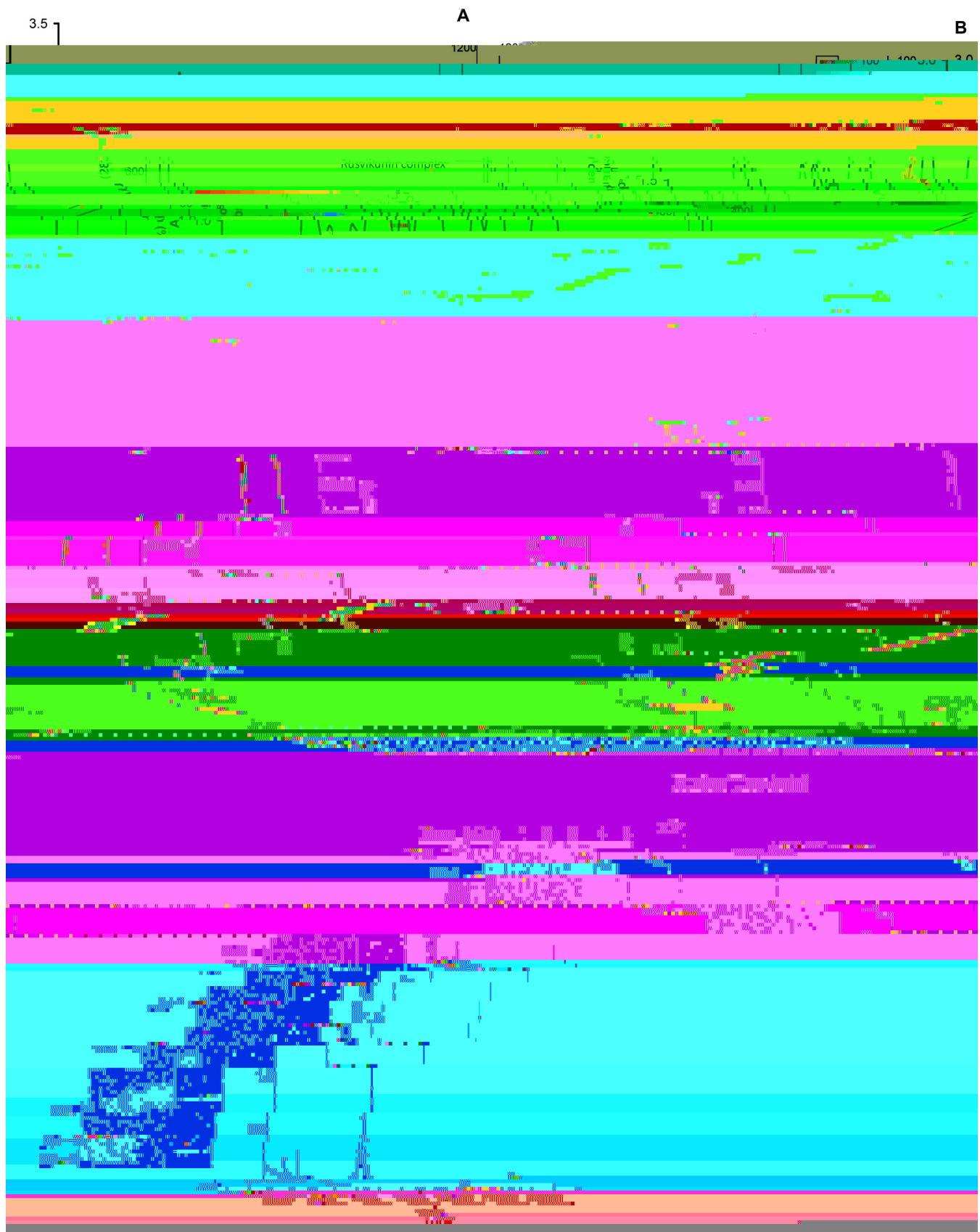


Fig. 1. (A)

Table 1

Multiple sequence alignment of N-terminal sequence of RP-44 with other known protease inhibitors from snake venom. \*Sequence of mature peptide.

Accession/Reference	Description	Species	N-terminal sequence	Residues
This work	Rusvikunin	Daboia russelii russelii	HDRPTFCNLAPESGR	1...15
P00990.1	Venom basic protease inhibitor II	D. russelii siamensis	HDRPTFCNLAPESGR	1...15
Q2ES50.1	Kunitz protease inhibitor 1	D. russelii russelii	HDRPTFCNLAPESGR	1...15
AFE83617.1	Kunitz-type protease inhibitor	D. russelii russelii	HDRPTFCNLAPESGR	1...15*
AFB74192.1	Protease inhibitor	D. russelii russelii	HDRPTFCNLAPESGR	1...15*
A8Y7P4.1	Trypsin inhibitor B4	Daboia russelii siamensis		

