

Supplemental Table 2. Pro-region in cyclotide precursors from Violaceae.

Cyclotide Pro-region including N-Terminal repeat (NTR)

precursor

<i>Voc1</i>	NFE-KDFITHETVQAILK-KVGPSSNGMLDEQTISAL--TGKTIISNPVLEEALLTHSNSINALG
<i>Voc2</i>	SFE-KDFITHETVQAILK-KVGPSSNGMLDEQAISAL--TGKTIISNPVLEEALLTHSNSINALG
<i>Voc3</i>	-FE-KDFITPETIQAILK-KSAPLSNIMLEEDVINALL-KSKTVISNPIIEEAFLK--NS-NGLN
<i>Vok1-1</i>	-TE-QDVITL---QAYEELLKNGAANGMT-----KTVISSPVLEEALV--SYSKNKLG
<i>Vok1-2</i>	-----NPLLEEAL-TAFACK-GLG
<i>Vok1-3</i>	-----HLLEEAL-VAFAKKGNLG
Tricyclon A	SLETKDVITRA---AYEKLVES-----GAIQGITM--TKTIISNPILEEALVAHFNRK--LG
Tricyclon B	SLE KDVITRAA--AYENLVNS-----GAIQGITM--TKTIISNPILEEALVSHFNRK--LG
Hyfl D	TLEKDVITPKAIELILKKTNTPLSNIMLEEDALVNAFV-KSKTMISNTVFDEALL-KHSNH-GLG
Hyfl E	SFEKDVITPRG-----LEEDTMSAL-V-KTKTLISDTVFD-ILL-KN-YH-TNG
Hyfl I	TLEKDVITPETIQAVLKKTGSPLSNIMLEEDVINA-MV-KSKTVISKTVLDEALL-KH---DGLG
Hyfl J	SFEKDIITPKAIQHLK-----ADGDALNAILKTKTLISDTVY-EALVLKNS---VN
Hyfl K	TLEKDVITPKAIELILKKTNTPLSNITLQDDALVNALV-KSKTMISNTVFEEALL-KHSNH-GLG
Hyfl L	TLEKDVITPKAIELILKKTNSPLSNIMLQEDALLNSLV-KTKTMISNTVFEEALL-KHSHH-GLG
Hyfl M	SFEKDVITPRGIELMLKKTNFPLSNIMLEEDTMSA-LV-KTKTLISDTVFD-ALL-KNS-H-TNG

Footnote to Supplemental Table 2.

The *Voc1-3* precursors are processed to produce the cyclotides cycloviolacin O8, O11, and O2, respectively. The *Vok1* precursor gene contains three NTR-regions, each followed by a cyclotide, namely kalata B1, kalata S, and kalata B1, respectively. In the Tricyclon precursor gene, which encodes Tricyclon A and B, the N-terminal repeat comprises the entire pro-region.