

Supplementary Materials: Mass Spectrometry Analysis and Biological Characterization of the Predatory Ant *Odontomachus monticola* Venom and Venom Sac Components

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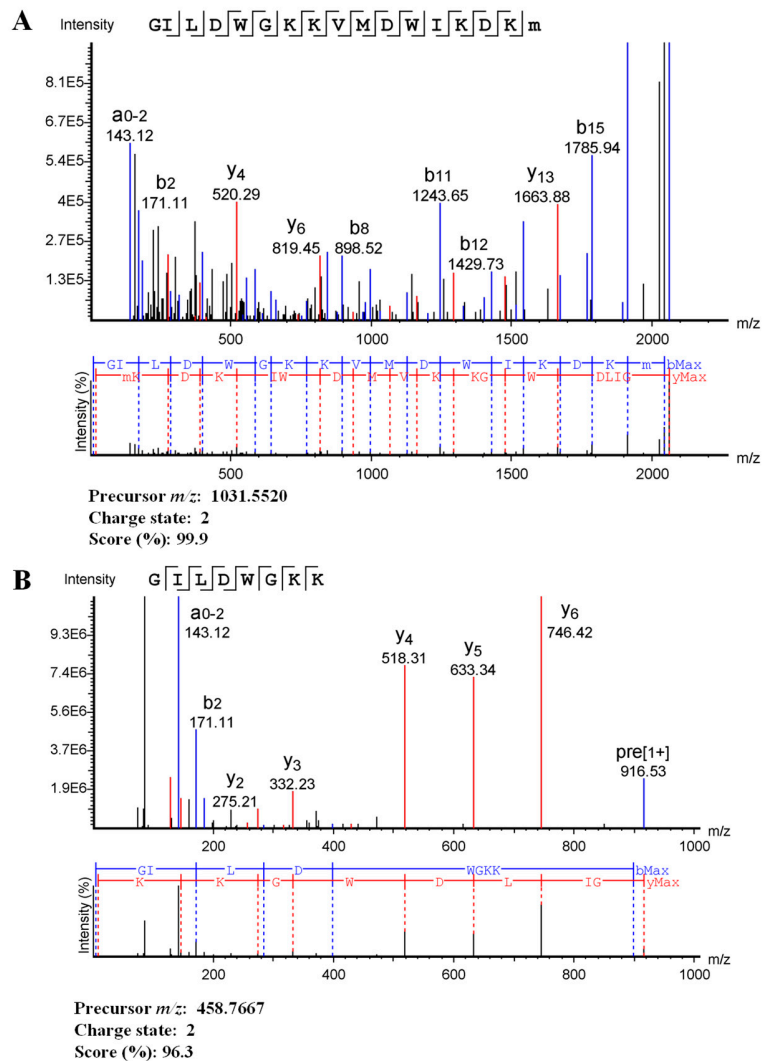


Figure S1. MS/MS spectra of pilosulin-like peptide 1. MS/MS spectra were obtained under a nonreducing condition without trypsin digestion (A) and under a reducing condition with trypsin digestion (B). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 1 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 1 for MS/MS spectrum interpretation.

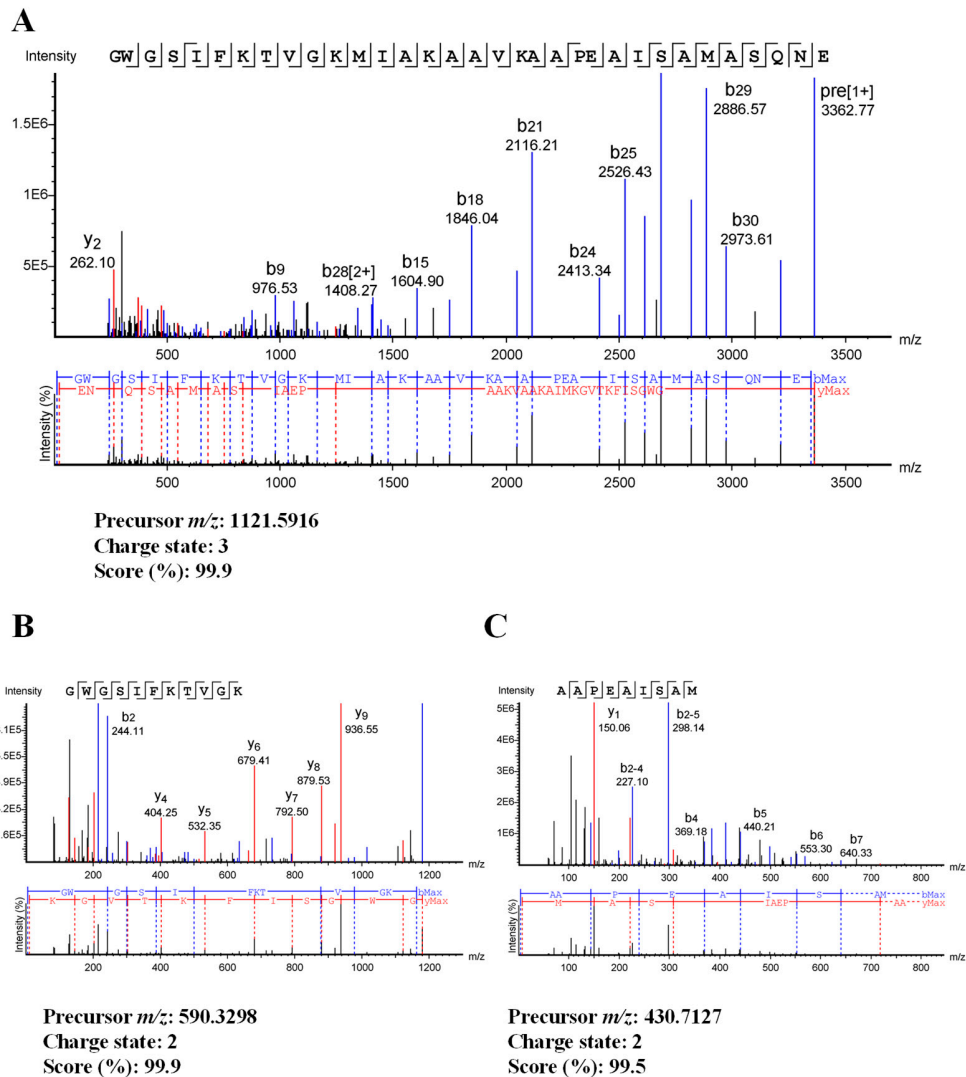


Figure S2. MS/MS spectra of pilosulin-like peptide 2. MS/MS spectra were obtained under a nonreducing condition without trypsin digestion (**A**), under a reducing condition without trypsin digestion (**B**), and under a reducing condition with trypsin digestion (**C**). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 2 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 2 for MS/MS spectrum interpretation.

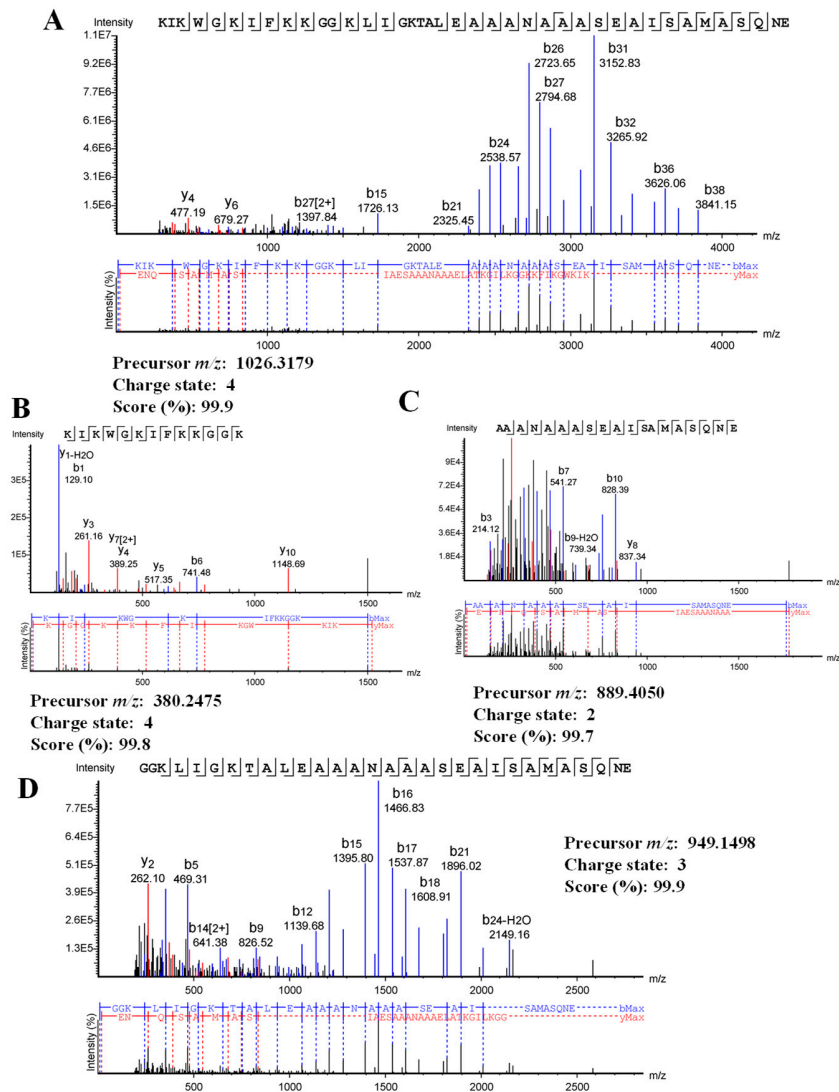


Figure S3. MS/MS spectra of pilosulin-like peptide 3. MS/MS spectra were obtained under a nonreducing condition without trypsin digestion (A,D) and under a reducing condition without trypsin digestion (B,C). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 3 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 3 for MS/MS spectrum interpretation.

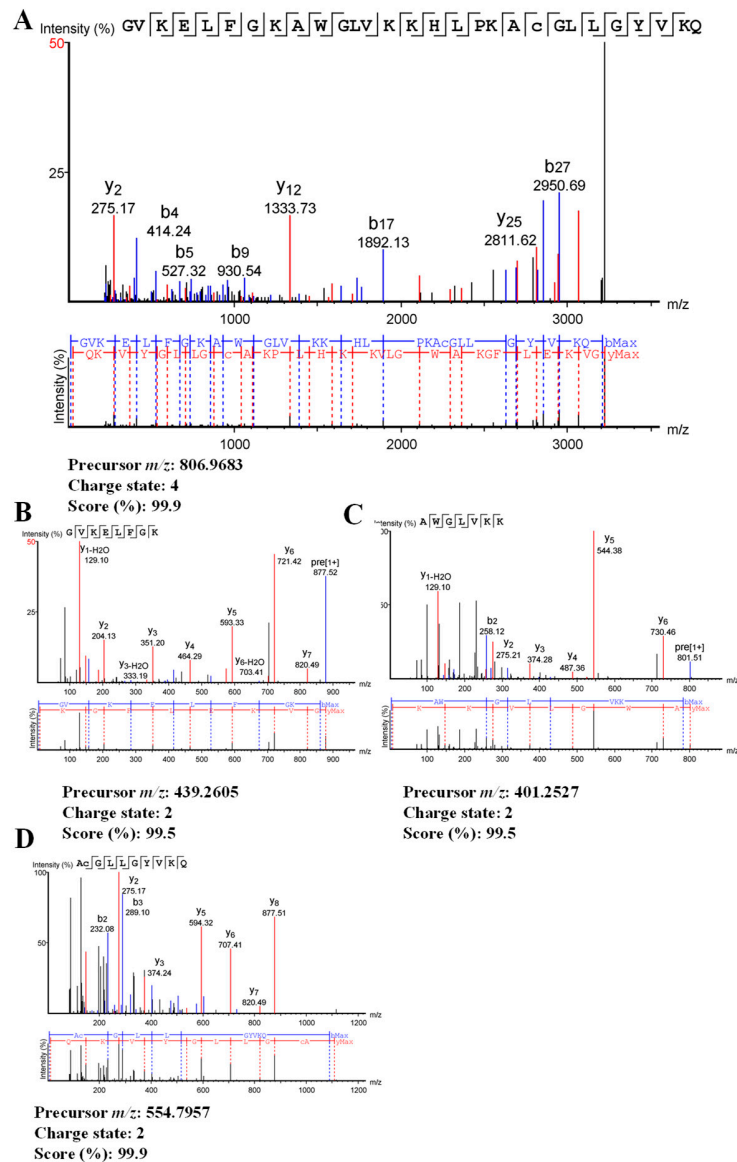


Figure S4. MS/MS spectra of pilosulin-like peptide 4. MS/MS spectra were obtained under a reducing condition without trypsin digestion (**A**) and under a reducing condition with trypsin digestion (**B–D**). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 4 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 4 for MS/MS spectrum interpretation.

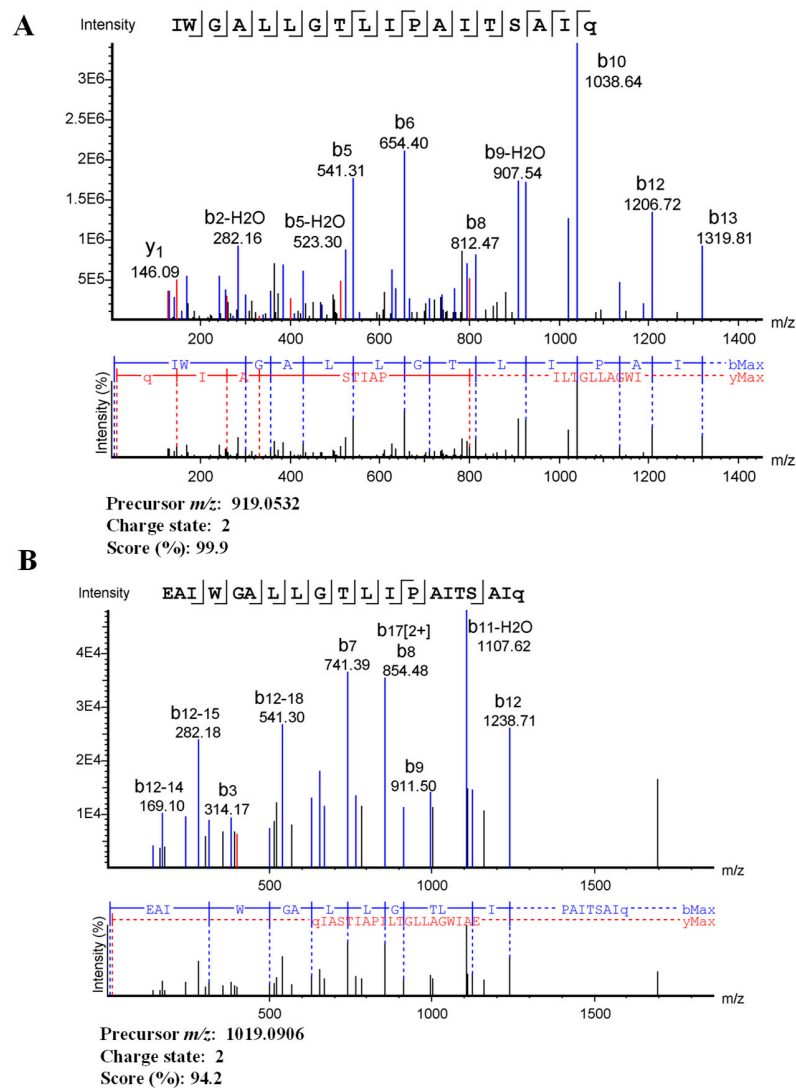


Figure S5. MS/MS spectra of pilosulin-like peptide 5. MS/MS spectra were obtained under a reducing condition without trypsin digestion (**A,B**). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 5 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 5 for MS/MS spectrum interpretation.

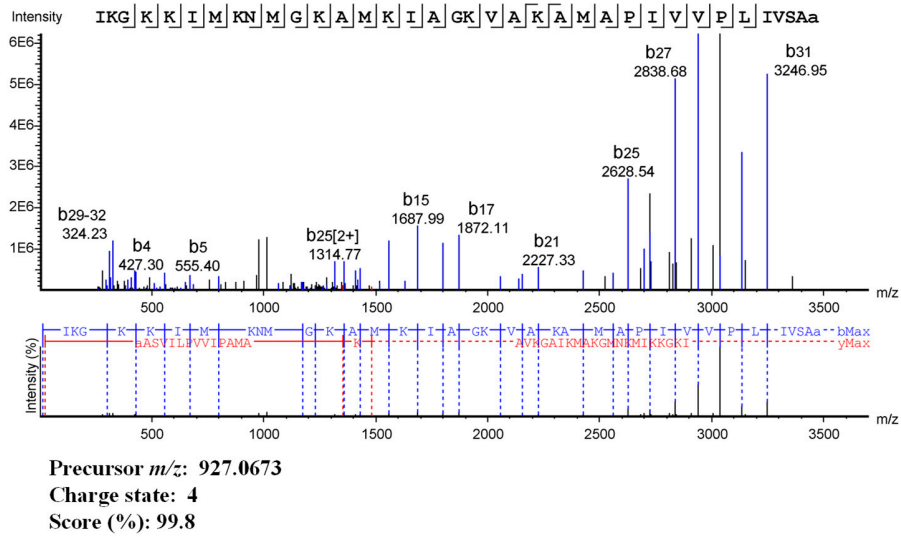
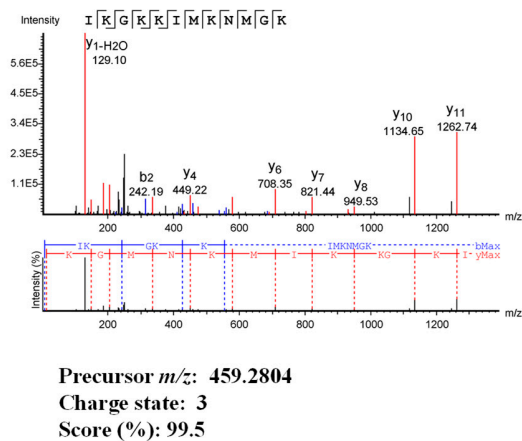
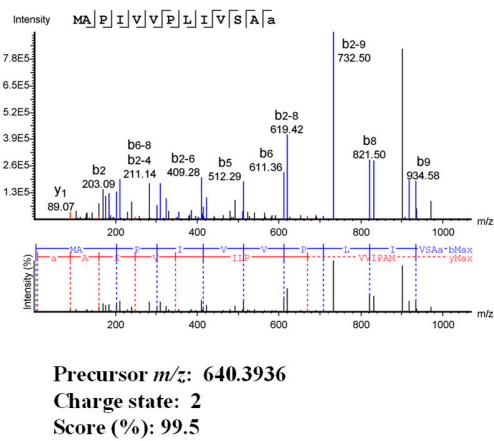
A**B****C**

Figure S6. MS/MS spectra of pilosulin-like peptide 6. MS/MS spectra were obtained under a nonreducing condition without trypsin digestion (**A,C**) and under a reducing condition without trypsin digestion (**B**). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 6 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 6 for MS/MS spectrum interpretation.

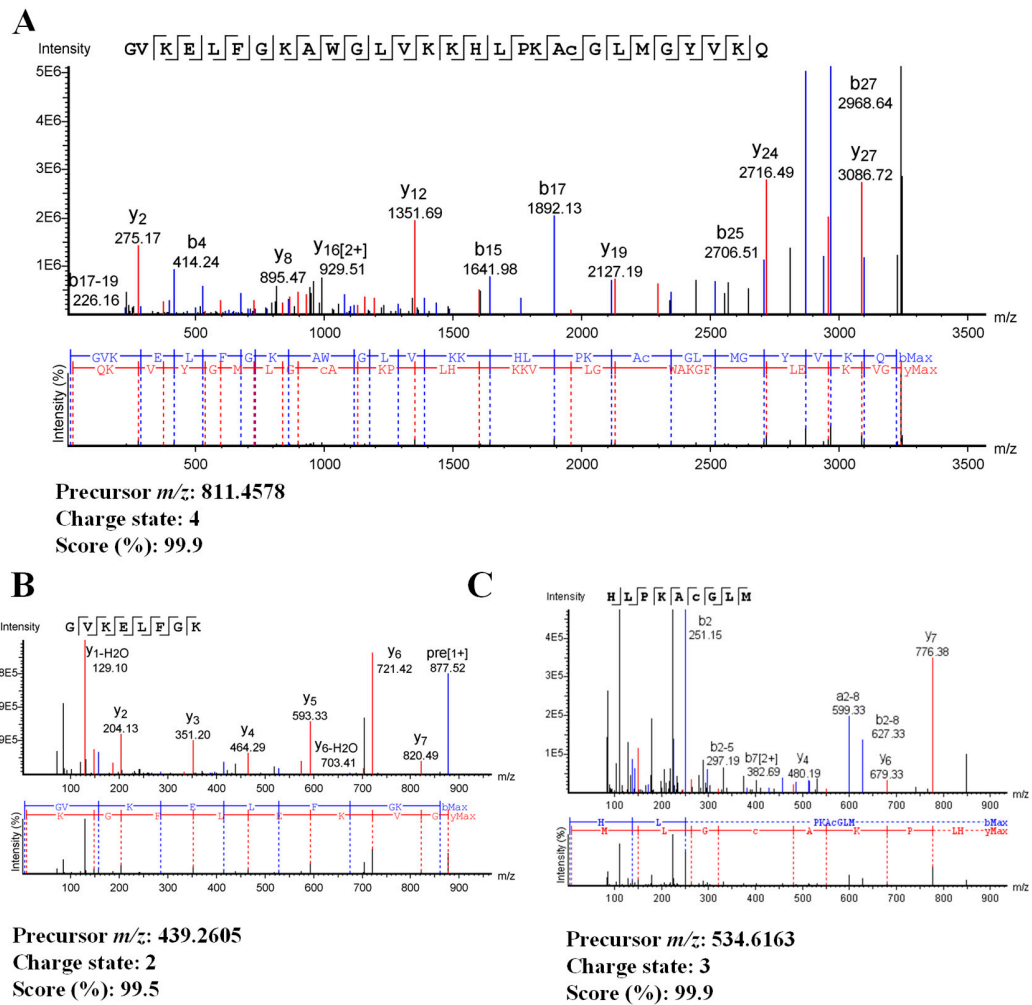


Figure S7. MS/MS spectra of pilosulin-like peptide 7. MS/MS spectra were obtained under a reducing condition without trypsin digestion (A,C) and under a reducing condition with trypsin digestion (B). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 7 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 7 for MS/MS spectrum interpretation.

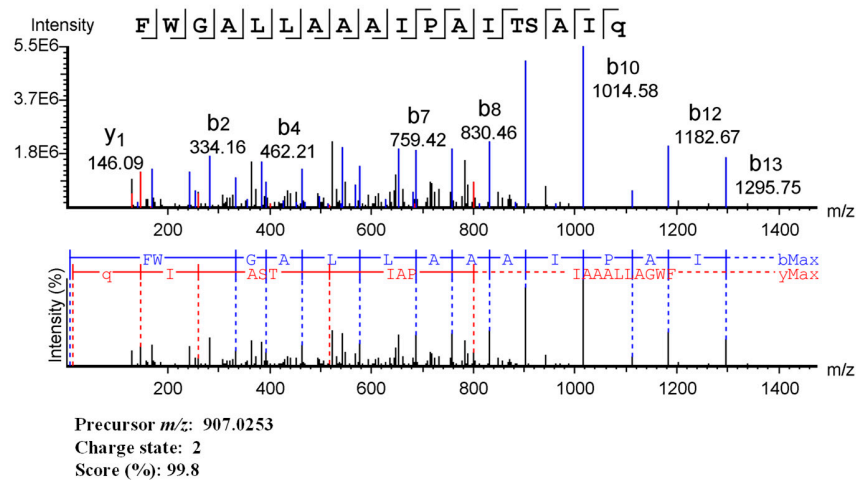
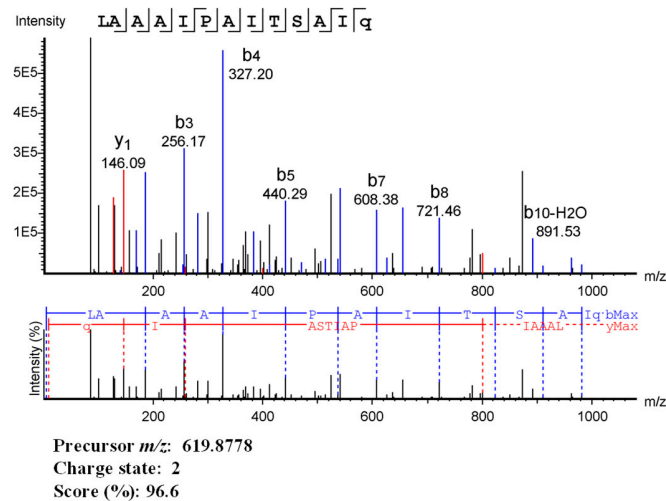
A**B**

Figure S8. MS/MS spectra of pilosulin-like peptide 8. MS/MS spectra were obtained under a nonreducing condition without trypsin digestion (**A**) and under a reducing condition without trypsin digestion (**B**). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 8 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 8 for MS/MS spectrum interpretation.

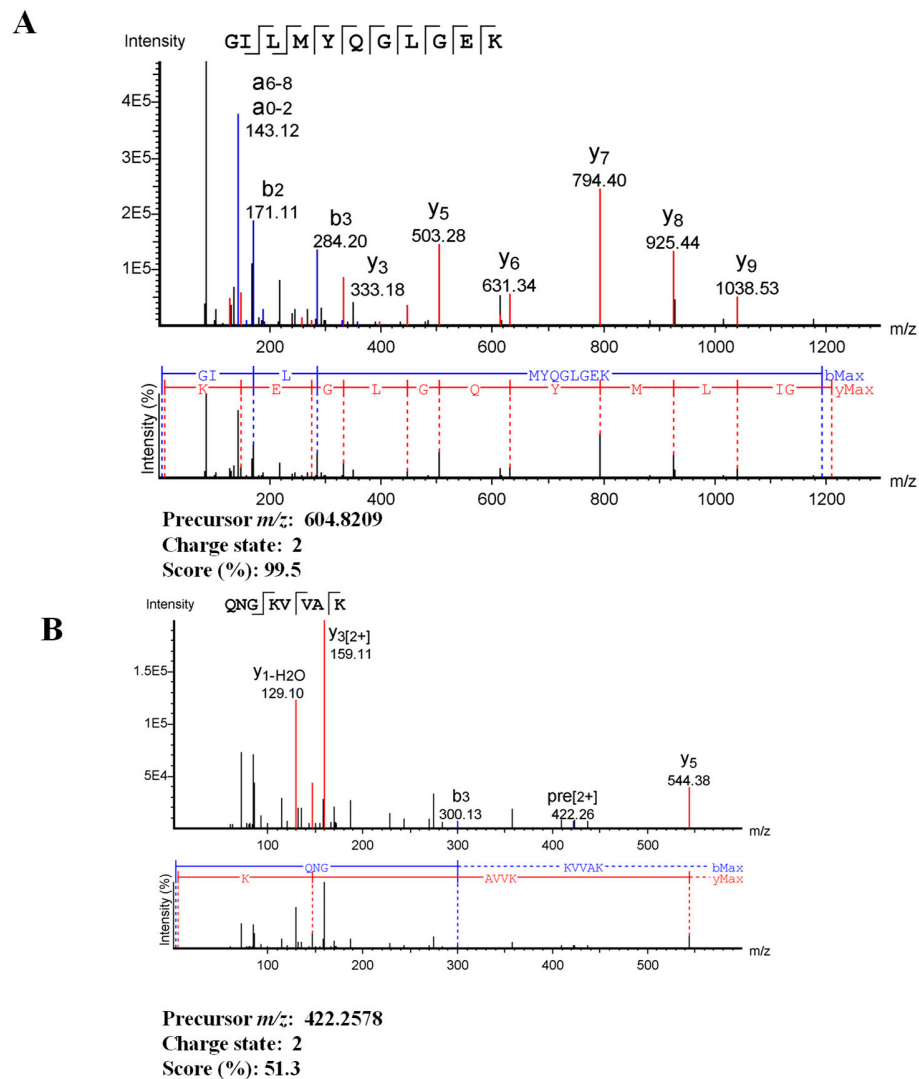


Figure S9. MS/MS spectra of pilosulin-like peptide 9. MS/MS spectra were obtained under a reducing condition with trypsin digestion (A,B). The panel shows the annotated spectra and b- and y-ions of the pilosulin-like peptide 9 amino acid sequence. The peptide's precursor m/z and charge state are indicated. We referred to the transcriptome data of pilosulin-like peptide 9 for MS/MS spectrum interpretation.

Met	Lys	Pro	Ser	Gly	Leu	Thr	Leu	Ala	Phe	Leu	Val	Val	Phe	Met	15
ATG	AAA	CCG	TCG	GGT	CTC	ACG	TTG	GCT	TTC	TTG	GTA	GTT	TTT	ATG	45
Met	Ala	Ile	Met	Tyr	Asn	Ser	Val	Gln	Ala	Glu	Ala	Leu	Ala	Asp	30
ATG	GCG	ATC	ATG	TAC	AAT	TCG	GTA	CAA	GCG	GAA	GCA	TTA	GCT	GAT	90
Ala	Asp	Ala	Glu	Ala	Phe	Ala	Glu	Ala	Gly	Val	Lys	Glu	Leu	Phe	45
GCC	GAT	GCC	GAA	GCC	TTT	GCC	GAG	GCT	GGG	GTC	AAG	GAA	TTG	TTT	135
Gly	Lys	Ala	Trp	Gly	Leu	Val	Lys	Lys	His	Leu	Pro	Lys	Ala	Cys	60
GGT	AAA	GCG	TGG	GGA	CTT	GTC	AAA	AAG	CAC	TTA	CCC	AAA	GCG	TGT	180
Gly	Leu	Met	Gly	Tyr	Val	Lys	Gln								75
GGA	CTG	ATG	GGA	TAC	GTA	AAG	CAA	TAA	TAA	AGA	AGA	TAG	ATG	AAA	225
CAA	CCG	CAC	CGA	CGA	TAC	ACG	GAA	GGA	CAT	GAA	TAA	TGC	TTT	ACT	270
ATC	AAA	AAT	TTT	CTG	TTT	ACA	AGA	ATG	TCG	TTT	AAA	TTG	ATA		315
TTC	TAT	TAA	AGA	ATA	AAA	TTA	TCT	GCA	AAC	ACT	TAA	AAA	AAA	AAA	360
AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AA		398

Figure S10. Nucleotide and deduced amino acid sequences of pilosulin-like peptide 7. The putative mature peptide is highlighted in gray. Nucleotide sequence corresponding to the raw reads of transcriptome analysis is underlined. Arrowhead indicates the predicted N-termini of mature pilosulin-like peptide 7. The nucleotide sequence of pilosulin-like peptide 7 has been assigned DDBJ/EMBL/GenBank Accession No. LC416796.

TAT	GTG	TGA	AAG	CTC	TTC	TAT	AAT	AAA	ATA	TAA	TTG	TAA	TAA	AAC	45
CTG	CAA	GTA	TCT	CTT	GTA	CAA	GGA	ATC	AAG	AAA	ACG	TAT	ATA	AAC	90
GGC	GCA	AAT	GCA	AGG	AAT	AAA	CAT	CAG	TTG	TGC	AAT	AAT	CAC	AAC	135
									Met	Lys	Leu	Ser	Ala	Leu	7
TTC	AGC	TTT	GCT	CAA	TAC	GAA	ATG	ATG	AAA	TTG	TCG	GCT	TTG	TCG	180
Leu	Ala	Phe	Ala	Ile	Ile	Leu	Met	Met	Thr	Ile	Met	Tyr	Thr	Lys	22
TTG	GCT	TTT	GCC	ATA	ATC	CTT	ATG	ATG	ACG	ATC	ATG	TAT	ACT	AAA	225
Ala	Asp	Ala	Asp	Ala	Ser	Ala	Asp	Ala	Glu	Ala	Asp	Ala	Asp	Ala	37
GCG	GAT	GCG	GAC	GCA	AGT	GCC	GAT	GCT	GAG	GCC	GAT	GCG	GAT	GCT	270
Glu	Ala	Glu	Ala	Phe	Trp	Gly	Ala	Leu	Leu	Ala	Ala	Ala	Ile	Pro	52
GAA	GCA	GAA	GCA	TTC	TGG	GGT	GCT	CTG	TTA	GCA	GCA	GCA	ATA	CCA	315
Ala	Ile	Thr	Ser	Ala	Ile	Gln	Gly	Lys							61
GCA	ATA	ACT	TCC	GCA	ATA	CAA	GGG	AAA	TAA	ACG	AAA	GTA	TTG	AAA	360
GCA	ATC	GAC	GAC	ACA	TCA	AAA	TAG	AAA	ACG	AAG	AAG	CGA	TGA	CTC	405
TGG	AAC	GAA	AGG	AAA	TGA	ATA	ATA	CTA	TAA	AAA	ATG	AAT	ACT	ATC	450
AAA	AAT	TTA	TTC	TAG	CTT	GCG	TTT	ATC	GCA	GAC	AAT	TGA	TGT	ATT	495
AAT	GTC	GTT	CGA	TTG	GCA	TTA	CAT	TGG							522

Figure S11. Nucleotide and deduced amino acid sequences of pilosulin-like peptide 8. The putative mature peptide is highlighted in gray. Arrowhead indicates the predicted N-termini of mature pilosulin-like peptide 8. The nucleotide sequence of pilosulin-like peptide 8 has been assigned DDBJ/EMBL/GenBank Accession No. LC416797.

Met	Lys	Pro	Ser	Gly	Leu	Thr	Phe	Ala	Phe	Leu	Val	Val	Phe	Met	15
ATG	AAA	CCG	TCG	GGT	CTC	ACA	TTC	GCT	TTC	TTA	GTA	GTT	TTT	ATG	45
Met	Ala	Ile	Met	Tyr	Asn	Ser	Val	Gln	Val	Thr	Ala	Asp	Ala	Asp	30
ATG	GCG	ATC	ATG	TAC	AAT	TCG	GTA	CAA	GTG	ACA	GCT	GAT	GCC	GAT	90
Ala	Asp	Ala	Glu	Ala	Glu	Ala	Leu	Ala	Asn	Ala	Leu	Ala	Glu	Ala	45
GCC	GAT	GCT	GAA	GCC	GAA	GCC	CTT	GCC	AAT	GCC	CTT	GCC	GAG	GCT	135
▼															
Gly	Ile	Leu	Met	Tyr	Gln	Gly	Leu	Gly	Glu	Lys	Ser	Asp	Gly	Leu	60
GGG	ATC	TTG	ATG	TAC	CAA	GGA	CTG	GGG	GAA	AAA	AGT	GAT	GGA	TTG	180
Asp	Gln	Gly	Gln	Asn	Gly	Lys	Val	Val	Ala						75
GAT	CAA	GGA	CAA	AAT	GGG	AAA	GTA	GTA	GCA	AAG	AAA	TAA	TAA	AGA	225
AGG	TAG	ATG	AAA	CAA	TCG	TAC	CGA	CAA	TAC	ACG	GAA	GGA	CAT	GGA	270
TAA	TGC	TTT	ACT	ATC	AAA	AAT	TTC	TTT	CTA	TTT	ACG	GCA	ATG	TCG	315
TTT	AAA	TTG	ATA	TTC	TAT	TAA	AGA	ATA	AAA	TTT	TCT	GCA	AAC	ATA	360
AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA				393

Figure S12. Nucleotide and deduced amino acid sequences of pilosulin-like peptide 9. The putative mature peptide is highlighted in gray. Nucleotide sequence corresponding to the raw reads of transcriptome analysis is underlined. Arrowhead indicates the predicted N-termini of mature pilosulin-like peptide 9. The nucleotide sequence of pilosulin-like peptide 9 has been assigned DDBJ/EMBL/GenBank Accession No. LC416798.