**Supplementary material**

**Proteomic analysis and antivenomics study of Western India *Naja naja* venom: Correlation between venom composition and clinical manifestations of cobra bite in this region**

**Assay of enzyme activity, plasma clotting activity, and platelet modulating property**

The crude *Naja naja* venom at a uniform dose of 20 µg/ml was assayed for phospholipase A2 (PLA2) activity by our previously described procedure (Doley and Mukherjee, 2003). One unit of PLA2 activity was defined as the amount of protein which produced a decrease in 0.01 absorbance in 10 min at 740 nm (Doley and Mukherjee, 2003). For the assay of L-amino acid oxidase (LAAO) activity, L-kynurenine was used as a substrate (Weissbach et al., 1960). One unit of LAAO activity was defined as nmol of kynurenic acid produced/min under the assay conditions and specific LAAO activity was expressed as units/mg protein.

The phosphohydrolase activity of the crude venom (20 µg/ml) against adenosine tri-phosphate (ATP) and adenosine di-phosphate (ADP) was assayed following the method of Williams and Esnouf (1962) with slight modifications as described by Mukherjee et al. (2016). Adenosine mono-phosphate (AMP)/5’-nucleotide (5’-NT) was assayed according to the Sinsheimer and Koerner’s (1952) with slight modifications described in our previous publications (Mukherjee et al., 2016; Kalita et al., 2017; Dutta et al., 2017) .One unit of ATPase/ADPase/AMPase activity was defined as μM Pi released per min at 37 °C.

The hyaluronidase activity was assayed by measuring the relative decrease in turbidity of hyaluronic acid substrate (1.0 mg/ml) (Pukrittayakamee et al., 1988). Crude *N. naja* venom (20 µg/ml) was added to 10 µl of substrate and the reaction volume was adjusted to 100 µl with assay buffer (0.2 M sodium acetate buffer, pH 6.0 containing 150 mM NaCl). After incubation for 30 mins at 37 °C, the reaction was stopped by adding 200 µl of 2.5% CTAB in 2% NaOH. Absorbance was noted at 405 nm in a 96-well microplate reader (Multiskan GO, Thermo Scientific, USA). Considering the control as 100% turbid, the unit of enzyme activity was expressed as turbidity reduction unit (TRU) per min per mg of venom (Pukrittayakamee et al., 1988).

Snake Venom Metalloprotease (SVMP) activity was assayed by using azocasein as a substrate. Crude *N. naja* venom (20 µg/ml) was added to reaction mixture and incubated at 37 °C for 10 min. The activity was checked by the spectrophotometric method and specific activity was expressed as ΔA450nm/min/mg protein (Mukherjee et al., 2016).

The proteolytic activity of the crude venom was assayed against human fibrinogen or fibrin**.** The reaction mixture containing 20 µg/ml of venom protein and substrate (2.5 mg/ml) dissolved in 1X phosphate buffered saline (PBS, pH 7.4), was incubated for 3 h at 37 °C and thereafter the reaction mixture was subjected to SDS-PAGE analysis under reduced conditions. A control was also run in parallel. The extent of degradation was determined by densitometric scanning of the gels using Image Quant TL software 8.1 (GE Healthcare, Sweden) (Kalita et al., 2017).

Esterase activity was assessed by measuring the rates of hydrolysis of p-Tosyl-L-arginine methyl ester hydrochloride (TAME) or Nα-Benzoyl-L-arginine ethyl ester hydrochloride (BAEE) as a substrate (1 mM) (Mukherjee and Mackessy, 2013). One unit of BAEE-esterase and TAME-esterase activity was defined as an increase of 0.01 absorbance unit at 244 nm and 254 nm, respectively during the first 5 min of the reaction at 37 °C. Acetylcholinesterase (AChE) activity was determined colorimetrically using 1 mM acetylthiocholine iodide as a substrate (Ellman et al., 1961). Enzyme activity was defined as the amount of protein which hydrolyzed 0.01 M of acetylcholine iodide per min under the assay conditions (Ellman et al., 1961). The phosphodiesterase (PDE) activity was assayed by slightly modifying the method described of Sulkowoski and Laskowoski (1971). The assay mixture (100 µl) contained 10 µM MgCl2, 200 µM Tris-HCl (pH 9.0) and 10 µM *bis-p*-nitrophenyl phosphate as a substrate. The reaction was initiated by adding crude venom (20 µg/ml) to the reaction mixture and was incubated at 37 ˚C for 10 min. The increase in absorbance was read at 400 nm in a plate reader (MultiSkan GO, Thermo Scientific, USA) and the activity was expressed in µmoles of *p*-nitrophenol released per min (using 17600 as molar extinction coefficient of *bis-p*-nitrophenyl phosphate).

**Supplementary Fig S1.** Alignment of tryptic and semi-tryptic peptide sequences derived from in-gel digestion of SDS-PAGE bands of GF fractions with snake venom protein families reported in the Elapidae database. The protein alignment was done using Clustal Omega programme (<https://www.ebi.ac.uk/Tools/msa/clustalo/>). The number of proteins in each protein classes is shown in parenthesis. The distinct peptides obtained for each of the following proteins has been highlighted in green or blue (two colours have been used in case of adjacent distinct/unique peptides). The amino acid substitutions within the unique/distinct peptides obtained from MS/MS are highlighted in red colour.

**Enzymatic Proteins**

**Phospholipase A2 (2 proteins)**

AAR16428.1 LNIYQFKNMIQCTVPSR-SWWDFADYGCYCGRGGSGTPVDDLDRCCQVHDNCYNQAQEITGCRPKWKTYTYECSQGTLTCKGRNNACAATVCDCDRLAAICFAGAPYNDNNYNIDLKARCQ

P15445.1 -NLYQFKNMIKCTVPSR-SWWDFADYGCYCGRGGSGTPVDDLDRCCQVHDNCYNEAEKISGCWPYFKTYSYECSQGTLTCKGDNNACAASVCDCDRLAAICFAGAPYNDNNYNIDLKARCQ

**Phospholipase B (1 protein)**

F8J2D3.1 MVRFGSAASSDNRRRRCWSWYWGGLLLLWAVAETRADLHYATVYWLEAEKSFQVKDLLDKNGDAYGYYNDTVQSTGWGILEIKAGYGSQLVSNEILMYAAGFLEGYLTASRMSDHVANLY

F8J2D3.1 HQMIKNVITEQKVKDFMQKQDEWTRQQIKNNKDDPFWRNAGYIIAQLDGLYMGNLEWAKRQKRTPLTKFEISFLNALGDLLDLIPALSPESRNNGFLSMSEISKMYEWDMGHCSALIKVL

F8J2D3.1 PGYENIYFAHSSWFTYAATLRIYKHLDFRIIDPQTKTGRASFSSYPGLLASLDDFYILGSGLIMLQTTNSVFNISLLQQVVPESLFAWERVRIANMMADSGKTWAQTFKKQNSGTYNNQY

F8J2D3.1 MILDTKKIKLRRSIEDGTLYIIEQVPNLVEYSDQTTILRKGYWPSYNIPFHKVIYNMSGYREYVQKYGLDFSYEMAPRAKIFRRDQGKVIDIESMKRIMRYNNYKKDPYTKHNPCNTICC

F8J2D3.1 RQDLYYMTPVPAGCYDSKVADINMAAKFTAYAINGPPVEKGLPIFSWVHFNETTHQGLPESYNFDFVTMKPVL

**Phosphodiesterase (1 protein)**

JAI09046.1 MQVLFISLVAVALGLGLGLGLKQSKQPQESCRNRCNETFRGELSYCSCDNKCTEREACCWDYQDICVLPTQSWSCNKLRCGERRMANVLCSCSEDCLTKKDCCTDYKSICKRETSWLKDQCASSSAAQCPEGFDQSPLIL

JAI09046.1 FSMDGFRAEYLETWDTLMPNINKLKTCGTHAKYMRAVYPTKTFVNHYTIVTGLYAETHGIIDNNIYDVNLNQNFSLSGRNMRNPAWWGGQPIWNTATYQGLKAATYFWPGSEVKINGSYPAIYKAYNKSTPFEARVMEVL

JAI09046.1 QWLDLPRAKRPDFSTLYIEEPDTTGHKYGPVSGQVIKSLQMADRTLGMLMEGLKQRNLHNCVNLILLADHGMEAISCNRLEYMADYFNTVDFFMYEGAAPRIRSKNVPKDFYTFDSEAIVKNLTCRKPKQHFKAYLAKDL

JAI09046.1 PKRLHFANNVRIDKVNLMVDRQWLAVRNKKYKYCSGGTHGYDNEFKSMEAIFLAHGPDFKEKNEVTSFENIEVYNLMCDLLKLKPAPNNGTHGSLNHLLKNPFYNPSPAKEQSSPLLCDFGPVPSPDLSGCKCSSITDLE

JAI09046.1 AVNQRLNLNDQAKTQCEADNLPYGRPHVLQHSKYCLLHQTKYISAYSQDILMPLWNSYTISKSLVKPTSVPPSASDCLRLDVRIPTAQSQTCSNYQPDLTITPGFLYPPDFSSSGPEQYDALITSNIVPMYKEFTRLWNY

JAI09046.1 FHSTLLPKYATERNGLNVISGPIFDYNYDGHFDSYDTIKQYVNNTKIPIPTHYFVVLTSCENSTNTPLNCPPGSLKVLSFILPHRPDNSESCADKSPNNLWVEERMQTHTARVRDVELLTGLDFYSVLKQPLSETLRLKT

JAI09046.1 FLPIFVNSVN

**Snake Venom Metalloprotease (9 proteins)**

AAM51550.1 --MIQALLVAICLAVFPYQGSSIILESGNVNDYEVVYPQKVPALSKGGVQNPQPETKYEDTMQYE------------------FHVNG-------EPVVLHLERNKGLFSEDYTETHYAP

JAS05092.1 --MIQALLVTICLAVFPYQGSSIILESGNVNDYEVVYPQKVPALPKGRIQNPQPETKYEDTMQYE------------------FQVNG-------EPVVLHLERNKGLFSEDYTETHYSS

D3TTC2.1 --MIQALLVIICLAVFPHQGSSIILESGNVNDYEVVYPQKVPALLKGGVQNPQPETKYEDTMRYE------------------FQVNG-------EPVVLHLERNKGLFSEDYTETHYAP

ACN50006.1 --MIQALLVIICLAVFPHQGSSIILESGNVNDYEVVYPQKVPALLKGGVQNPQPETKYEDTMRYE------------------FQVNG-------EPVVLHLERNKGLFSEDYTETHYAP

AAF00693.1 --------------MIQLSWSSIILESGNVNDYEVVYPQKVPALLKGGVQNPQPETKYEDTMQYE------------------FQVNG-------EPVVLHLERNKGLFSEDYTETHYAP

D5LMJ3.1 --MIQALLVIICLAVFPHQGSSIILESGNVNDYEVVYPQKVPALLKGGVQNPQPETKYEDTMRYE------------------FQVNG-------EPVVLHLERNKGLFSEDYTETHYAP

ACN50005.1 --MIQALLVIICLAVFPHQGSSIILESGNVNDYEVVYPQKVPALLKGGVQNPQPETKYEDTMRYE------------------FQVNG-------EPVVLHLERNKGLFSEDYTETHYAP

ADG02948.1 --MIQALLVIICLAVFPHQGSSIILESGNVNDYEVVYPQKVPALLKGGVQNPQPETKYEDTMRYE------------------FQVNG-------EPVVLHLERNKGLFSEDYTETHYAP

P82942.1 ------------------------------------------------------------------------------------------------------------------------

AAM51550.1 DGREITTSSPVQDHCYYHGYIQNEADSSAVISACDGLKGHFKHQGETYFIEPLELSDSEAHAIYKDENVEEEEEIPKICGV---TQTTWESDEPIEKSSQLTNTPEQDRYLQAKKYIEFY

JAS05092.1 DDTEITTSPPVQDHCYYHGYIQNDADSSAVISACDGLKGHFKHQGETYFIEPLKLSESGSHAIYKDENVEKEDETLKICVV---TQTTWESDESIEKISQLTNTPEQDRYLQVKKYIEFY

D3TTC2.1 DGREITTSPPVQDHCYYHGYIQNEADSSAVISACDGLKGHFEHQGETYFIEPLKISNSEAHAIYKDENVENEDETPEICGV---TETTWESDESIEKTSQLTNTPEQDRYLQAKKYIEFY

ACN50006.1 DGREITTSPPVQDHCYYHGYIQNEADSSAVISACDGLKGHFEHQGETYFIEPLKISNSEAHAIYKDENVENEDETPEICGV---TETTWESDESIEKTSQLTNTPEQDRYLQAKKYIEFY

AAF00693.1 DGREITTSPPVQDHCYYHGYFQNEADSSAVISACDGLKGHFKLQGEIYFIEPLKISDSEAHAIYKDENVEEEDETPKICGV---TDTTWESDEPIKKTSLLTNTPEQDRYLQAEKYIEFY

D5LMJ3.1 DGREITTSPPVQDHCYYHGYIQNEADSSAVISACNGLKGHFKHQGETYFIEPLELSESEAHAIYKDENVEKEDETPKICAV---TQTTWESDESIEKTSQLTNTPEQDRYLQVKKYIEFY

ACN50005.1 DGREITTSPPVQDHCYYHGYIQNEADSSAVISACDGLKGHFEHQGETYFIEPLKISNSEAHAIYKDENVENEDETPEICGV---TETTWESDESIEKTSQFTNTPEQDRYLQDKKYIEFY

ADG02948.1 DGREITTSPPVQDHCYYHGYIQNEADSSAVISACDGLKGHFEHQGETYFIEPLKISNSEAHAIYKDENVENEDETPEICGV---TETTWESDESIEKTSQLTNTPEQDRYLQDKKYIEFY

P82942.1 -----------------------------------------------------------------------------------------------------TNTPEQDRYLQAEKYIEFY

AAM51550.1 VVVDNVMYRKYTGKLHVITRRVYEMVNALNTMYRRLNFHIALIGLEIWSNGNEINVQSDVQATLDLFGEWRENKLLPRKRNDNAQLLTSTEFNGTTTGLGYIGSLCSPKKSVAVVQDHSK

JAS05092.1 VVVDNRMYRHYKCKKRAIKRRVYEMVNLLNTIYRPLNFYIALIGLEIWSHRDKINIETDAGITLNSFGEWRENVLLPRKRNDNAQLLTRIQFNGTVIGLGYVGTICSLQKSVAVIQDYSR

D3TTC2.1 VVVDNIMYRHYKRDQPVIKRKVYEMINTMNMIYRRLNFHIALIGLEIWSNINEINVQSDVRATLNLFGEWREKKLLPRKRNDNAQLLTGIDFNGTPVGLAYIGSICNPKTSAAVVQDYSS

ACN50006.1 VVVDNIMYRHYKRDQPVIKRKVYEMINTMNMIYRRLNFHIALIGLEIWSNINEINVQSDVRATLNLFGEWREKKLLPRKRNDNAQLLTGIDFNGTPVGLAYIGSICNPKTSAAVVQDYSS

AAF00693.1 MVVDNIMYRHYKRNQLVIKRKVYEMINTMNMIYRRLNFHIALIGLEIWSNINEINVQSDVKATLDLFGEWREKKLLPRKRNDNAQLLTGIDFNGTPVGLAYIGSICNPKTSAAVVQDYSK

D5LMJ3.1 LVVDNKMYKNHTS-NQELRTRVYEMVNYLNTKYRRLNFHIALIGLEIWSNQDKVDMDPGANVTLKSFAEWRAK-LPPHKRNDNAQLLTGIDFNGTTVGLAYTGTLCTW-GSVAVVQDYSR

ACN50005.1 VIVDNRMYRYYNNDKPAIKIRVYEMINAVNTKFRPLKIHIALIGLEIWSNKDKFEVKPAASVTLKSFGEWRETVLLPRKRNDNAQLLTGIDFNGNTVGRAYIGSLCKTNESVAIVQDYNR

ADG02948.1 VIVDNRMYRYYNNDKPAIKIRVYEMINAVNTKFRPLKIHIALIGLEIWSNKDKFEVKPAASVTLKSFGEWRETVLLPRKRNDNAQLLTGIDFNGNTVGRAYIGSLCKTNESVAIVQDYNR

P82942.1 VIVDNRMYRYYNYDKPAIKIRVYEMINAVNTKFRPLKIHIALIGLEIWSNEDKFEVKPAASVTLKSFREWRQTVLLPRKRNDNAQLLTGINLNGTAVGIAYPGSLCTQ-RSVFVVQDYNR

AAM51550.1 STSMVAITMAHQMGHNLGMNDDRASCTCGSNKCIMS-TKYYESLSEFSSCSVQEHR-----EYLLRDRPQCILNKPSRKAIVTPPVCGNYFVERGEECDCGSPEDCQNTCCDAATCKLQH

JAS05092.1 KSNLVASAMAHEMGHNLGINHDRASCSCTAGPCIMFPTISFKPFYEFSSCSVQEHQ-----RYLLRDRPQCILNKPLSTDIITPSVCGNHLVDVGEECDCGSPQDCQSACCNATTCKLQH

D3TTC2.1 RTRMVAITMAHEMGHNLGMNHDRGFCTCGFNKCVMS-TRRTKPAYQFSSCSVREHQ-----RYLLRDRPQCILNKPLSTDIVSPPICGNYFVEVGEECDCGSPADCQSACCNATTCKLQH

ACN50006.1 RTRMVAITMAHEMGHNLGMNHDRGFCTCGFNKCVMS-TRRTKPAYQFSSCSVREHQ-----RYLLRDRPQCILNKPLSTDIVSPPICGNYFVEVGEECDCGSPADCQSACCNATTCKLQH

AAF00693.1 STRMVAITMAHEMGHNLGMNHDKGFCTCGFNKCVMS-TRRTKPAYQFSSCSVREHQ-----RYLLRDRPQCILNKPLSTDIVSPPICGNYFVEVGEECDCGSPADCQSACCNATTCKLQH

D5LMJ3.1 RTILMASTMAHELGHNMGIHHDKANCRCSHSPCIMSDTISDEPFYEFSSCSVREHQ-----EYLLRERPQCILNKPSRKAIVSRPVCGNNFVEVGEQCDCGSLQDCQSTCCNATTCKLQP

ACN50005.1 RISLVASTITHELGHNLGIHHDKASCICIPGPCIMLKKR-TAPAFQFSSCSIREYR-----EYLLRDRPQCILNKPLSTDIVSPPICGNYFVEVGEECDCGSPQACQSACCNAAT-----

ADG02948.1 RISLVASTMTHELGHNLGIHHDKASCICIPGPCIMLKKR-TAPAFQFSSCSIREYR-----EYLLRDRPQCILNKPLSTDIVSPPICGNYFVEVGEECDCGSPQACQSACCNAAT-----

P82942.1 RMSLVASTMTHELGHNLGIHHDEASCICIPGPCIMLKKR-TAPAFQFSSCSIRDYQ-----EYLLRDRPQCILNKPLSTDIVSPAICGNYFVEEGEECDCGSPAACQSACCDAAT-----

AAM51550.1 EAQCDSGECCEKCKFKGAGAECRAAKNDCDFPELCTGRSAKCPKDSFQRNGHPCQNNQGYCYNGTCPTLTNQCATLWGPGAKMSPGLCFMLNWNARSCGLCRKENGRKILCAAKDVKCGR

JAS05092.1 EAQCDSEECCEKCKFKK-GAECRAAKDDCDLPEFCTGRSAECPTDSFQRNGHPCQNNQGYCYNGKCPIMKNQCIALMGSGVKVSRDMCFTLNQRGKGCGFCRKENGANIPCAAKDVKCGR

D3TTC2.1 EAQCDSEECCEKCKFKGARAECRAAKDDCDLPELCTGQSAECPTDVFQRNGLPCQNNQGYCYNGKCPIMTNQCIALRGPGVKVSRDSCFTLNQRTRGCGLCRMEYGRKIPCAAKDVKCGR

ACN50006.1 EAQCDSEECCEKCKFKGARAECRAAKDDCDLPELCTGQSAECPTDVFQRNGLPCQNNQGYCYNGKCPIMTNQCIALRGPGVKVSRDSCFTLNQRTRGCGLCRMEYGRKIPCAAKDVKCGR

AAF00693.1 EAQCDSEECCEKCKFKGAGAECRAAKDDCDLPELCTGQSAECPTDVFQRNGLPCQN-NGYCYNGKCPIMTNQCIALRGPGVKVSRDSCFTLNQRTRGCGLCRMEYGRKIPCAAKDVKCGR

D5LMJ3.1 HAQCDSEECCEKCKFKGAETECRAAKDDCDLPEFCTGQSAECPTDSLQRNGHPCQNNQGYCYNGKCPTMENQCITLLGPNYTVGPAGCFKNNRKGDDVSHCRKENGAKIPCAAKDEKCGT

ACN50005.1 ------------CQFKGAETECRVAKDDCDLPELCTGQSAECPTDSLQRNGHPCQNNQSYCYNGTCPTLTNQCITLLGPHFTVSPKGCFDLNMRGDDGSFCRMEDGTKIPCAAKDVKCGR

ADG02948.1 ------------CQFKGAETECRVAKDDCDLPELCTGQSAECPTDSLQRNGHPCQNNQGYCYNRTCPTLTNQCITLLGPHFTVSPKGCFDLNMRGDDGSFCGMEDGTKIPCAAKDVKCGR

P82942.1 ------------CKFNGAGAECRAAKHDCDLPELCTGQSAECPTDSLQRNGHPCQNNQGYCYNGKCPTLTNQCIALLGPHFTVSPKGCFDLNMRGDDGSFCRMEDGTKIPCAAKDVKCGR

AAM51550.1 LFCKKKNSMICHCPPPSKDPNYGMVAPGTKCGVKKVCRNRQCVKV----

JAS05092.1 LFCKKGNSMTCRCSVSPRDPDYGMVEPGTKCGDGMVCSNRQCVKVQTAY

D3TTC2.1 LFCKRRNSMICNCSISPRDPNYGMVEPGTKCGDGMVCSNRQCVDVKTAY

ACN50006.1 LFCKRRNSMICNCSISPRDPNYGMVEPGTKCGDGMVCSNRQCVDVKTAY

AAF00693.1 LFCKKRNSMICNCSISPRDPSYGMVEPGTKCGDGMVCSNRQCVDVKTAY

D5LMJ3.1 LYCTEIKKTGCIVPVSPRDPDSRMVEPGTKCEDKKVCSKSQCVKV----

ACN50005.1 LYCTEKNTMSCLIPP---NPDGIMAEPGTKCGDGMVCSKGQCVDVQTAY

ADG02948.1 LYCTEKNTMSCLIPP---NPDGIMAEPGTKCGDGMVCSKGQCVDVQTAY

P82942.1 LYCTEKNTMSCLIPP---NPDGIMAEPGTKCGDGMVCSKGQCVDVQTAY

**Nucleotidase (1 protein)**

JAI09047.1 MPTSRRRSGAHGCPRSAPSAMWRLVGAVCFCAALSVAAAGSFKLTILHTNDVHARVEQTSRDSGKCTREDCYGGVARRATKIREIRASHRNVLLLDAGDQYQGTVWFNYFKGREVVHFMN

JAI09047.1 SLRYDAMALGNHEFDNGLNGLLDPLLKNVKFPILSANIRPKGPIASNISGYILPYKIINVGSEKVGIIGYTTKETPVLSNPGPYLEFRDEVEELQKQADKLTTLGVNKIIALGHSGFKED

JAI09047.1 CRIAQKVKGVDVVVGGHTNTFLYTGSPPSNEVPAGNYPFMQLSDDGRQVPVVQAYAFGKYLGYLNVIFDDKGKVIKASGNPILLNKSIQEDPAVKAEVSRMKVQLQKYSKQEIGKTIVYL

JAI09047.1 NGTTHACRFHECNLGNLICDAVVYNNLRHPDDNEWNHVSMCIVNGGGIRSPIDEKANNGIITLEELTAVLPFGGTFDLLQIKGSALRQAFEHSVHRHGQGTGELLQVSGIKVLYDLSQKP

JAI09047.1 GKRVVSLNVLCTECRVPAYVPLQMEKTYKVLLPSFLAAGGDGYYMLKGDSSNHSSGDLDISIVSDYIKRMGKVFPAMEGRVMFSAGTLFQAHHS

**Acetylcholinesterase (1 protein)**

JAA74736.1 MPAPWPWWLQLVLCILSSVAVLPGRASELKVSTQMGLVRGLSLPVLDGHVSAFLGIPFAEPPVGRMRFLRPEPVKPWQHILDATSYQRACYQAVDNSYPGFQGTEMWNPNRGMSEDCLYLN

JAA74736.1 IWVPSPRPRDVPVLVWIYGGGFYSGAASLDVYDGRFLTYTQNVIVVSLSYRVGAFGFLGLPGSPEAPGNMGLLDQRLALQWIQNNIHHFGGNPSAVTIFGESAGAASVGMHLLSTQSRALF

JAA74736.1 QRAILQSGGPNAPWATVTPAESRRRAALLGKQLGCQFNNDSELVSCLRSKTPQELIDEEWSVLPYKSIFRFPFVPVIDGDFFPDTPEAMLSSGNFKETQVLLGVVKDEGSYFLIYGLPGFS

JAA74736.1 KDNESLINQADFLEGVRMSVPHANDIATEAVVMQYTDWQDQDNGEKNREALDDIVGDHNVICPVVQFANDYAKRNNKVYAYLFDHRASNLLWPPWIGGPPRLRDRVCLWIAPQRQPELHTP

JAA74736.1 REGAEPQ-DDXLLGQLXPDREPHRPCREGRGLAHLHRLPAAVCPAQHPAAGHPTQPAGPDLR

**L-Amino acid oxidase (1 protein)**

A8QL58.1 MNVLFIFSLLFLAALESCADDRRSPLEECFQQNDYEEILEIARNGLKKTSNPKHVVVVGAGMAGLSAAYVLAGAGHKVTLLEASERVGGRVITYHNDREGWYVNMGPMRLPERHRIVREY

A8QL58.1 IRKFGLKLNEFFQENENAWYYINNIRKRVWEVKKDPSLLKYPVKPSEEGKSASQLYQEPLRKVIEELKRTNCSYILNKYDSYSTKEYLIKEGNLSRGAVDMIGDLLNEDSSYHLSFMESL

A8QL58.1 KSDALFSYEKRFDEIVGGFDQLPISMYQAIAEMVHLNARVIKIQYDAEKVRVTYQTPAKTFVTADYVIVCSTSRAARRIYFEPPLPPKKAHALRSIHYRSATKIFLTCSKKFWEADGIHG

A8QL58.1 GKSTTDLPSRFIHYPNHNFTSGIGVIMAYVLADDSDFFQALDTKTCADIVINDLSLIHDLPKREIQALCYPSIKKWNLDKYTMGSITSF

**Snake venom serine protease (1 protein)**

ABN72541.1 MVLIRVLASLLILQLSYSKSLDDGAKESAYDDEIQQSSWGNSTVNTTLTETVVIQLIMGGSECYKSKHPFLVYLYNSAGFFCSGTLLNHEWVLTAAHCNRDDIQLKLGVHNVHVHYEDEQ

ABN72541.1 IRVPKEKLCCLSTKNCTQWSQDIMLIRLNSSVNNSKHIEPLSLPSRPPSMGSDCTVMGWGTITSPKVTYPKVPHCVDIKILHNPVCQAAYPTMSRKNILCAGVLEGGKDSCKGDSGGPLI

ABN72541.1 CDGQIQGIVSWGRFPCAQLLEPGVYTKVFDYIDWIRGIIAGN

**Aminopeptidase (1 protein)**

JAB54710.1 MAKGFFISKSLGIVGIVLGLGAVATIIALSVVYSQEKQRADNAVANQSPSSTIQAGATIASTAQATTAGATGAATAGATGAATAGASSTITAKPLEPWDLFRLPKTLMPTFYNVSLQPFLTETAPNFYIFKGSSTVEFQC

JAB54710.1 KQPTDLILIHSKKLNYTLQESFLASLKGVDAVAPAIERTWLEEKTEYLVVKLKEKLQQDKTYYLHTVFTGELADDLAGFYRSTYMEGGITKLVATTQMQAADARKAFPCFDEPAMKANFSITLTYLPPYKALSNMPAQKT

JAB54710.1 EEVTMDGLTWLRTEFEPTLKMSTYLLAFIVSEFENVSTIQNNTLIQIWGRPKSIREGQGDYALNVSWPILNFFEREYKVPYPLERLDQVALPDFNAGAMENWGLITYRESALLFDTNFSSIGNKERIVTVIAHEVAHQWF

JAB54710.1 GNLVTLDWWNDLWLNEGFASYVEYLGADEAESSWNIKDLIVPNDVYRVMAIDALASSHPLSSPADEVNTPAQISEVFDAISYSKGAAVIRMLSEFLTEPVFREGLKSYFETYQYKNTVCDDLWQQLQMVVTDRNMSLPGT

JAB54710.1 VKAIMDRWTLQMGFPVLTVNATTGTVTQKHFLLDPESPVERPSQFNYSWIVPVSWLSAGKQAEMYWLTETSAQNDNFSIPADPAQWLLLNVNVTGYFRVNYDLANWEKLISQLNGDLQKIPVLNRAQIIDDAFNLARAKH

JAB54710.1 VGTDLALNTTRYLSKEREYLPWDTALDNLDYFRLMFDRSEVYGPMQLYVRRQVSPLFQHYRNVTRNWTQIPEDLMNQYNQILAIRTACSYGVPECNELASTWFEAWKADPIANRIPPNLRSAIYCSAIRNSGQDAWDFVW

JAB54710.1 NLFRQAQVISEADKLRSALTCSQVPWILQRYLEYTLDSSLIRRQDATSTINSIASNVVGQPLVWDFVRRNWRTLFQQFGGSSFSFSSLIQSVTQRFASPFELQQLEQFKADNADVGFGSATRALEQALERTKANIKWVAE

JAB54710.1 NKPLVLRWFQDNK

**Non-Enzymatic Proteins**

**Three Finger Toxins (23 proteins)**

P59276.1 ---------------------LECHNQQSSQPPTTKTCS-GETNCYKKWWSD----HRGTIIERGCG--CPKV-KPGVNLNCCRTDRCNN----------------------

CAA90964.1 MKTLLLTMVVVTIVCLDLGYTLKCHNTQ--LPFIYKTCPEGKNLCFKATL-KKF--PLKFPVKRGCADNCPKN-SALLKYVCCSTDKCN-----------------------

AAK49439.1 MKTLLLTLVVVTIVCLDLGYTLKCNK-L--VPLFYKTCPAGKNLCYKMYM-VAT---PKVPVKRGCIDVCPKS-SLLVKYVCCNTDRCN-----------------------

AAB18383.1 MKTLLLTLVVVTIVCLDLGYTLKCNK-L--VPLFYKTCPAGKNLCYKMFM-VAT---PKVPVKRGCIDVCPKN-SLLVKYVCCNTDRCN-----------------------

JAB52868.1 MKTLLLTLVVVTIVCLDLGYTKTCYKYDTLFGKTTETCADGQNICFKRWH-MLV--PGRYHVSRGCAATCPKA-QNHDSVECCAKENCNA----------------------

APB88857.1 MKTLLLSLVVVTIVCLDLGYTRLCLSDYSIFSETIEICPDGHNFCFKKFP-KGI--TRLPWVIRGCAATCPKA-EARVYVDCCARDKCNR----------------------

P29179.1 ---------------------LTCLICPEKYCNKVHTCLNGENICFKR-----FNRILGKRYDLGCAATCPTV-KTGI-VQCCSTDKCNH----------------------

AAD40974.1 MKTLLLTLVVVTIVCLDLGYTRTCFITPD-V--KSKPCPPGQEVCYTKTWCDGFCGIRGKRVDLGCAATCPTPKKTGIDIICCSTDDCNTFPL------RPRGRLSSIKDHP

JAA74929.1 MKTLLLTLVVVTIVCLDLGYTRTCFKTPAPV--RSGPCPPGEDLCFTRTWRDGHSGNRGPRVDLGCAATCPTTDKTEIHISCCSEDDCNTFPQWERPKPRPRGRLSSIKDHA

ABK63537.1 MKTLLLTLVVVTIVCLDLGDSLICYMGPK----TPRTCPRGQNLCYTKTWCDAFCSSRGKVVELGCAATCPIA-KSYEDVTCCSTDNCNPFPVRPRPHP-------------

JAA74796.1 MKTLLLTLVVVTIVCLDLGYTRTCWLTPE-V--KPQTCPPGQDQCFTKTWCDAWCPIRGERVELGCAATCPTV-KPGVKIVCCSTDNCNPFPTKRR----------------

P25672.1 ---------------------IRCFITPD-I--TSKDCPNG-HVCYTKTWCDGFCRIRGERVDLGCAATCPTV-KTGVDIQCCSTDDCDPFPTRKRP---------------

P25669.1 ---------------------IRCFITPD-I--TSKDCPNG-HVCYTKTWCDGFCSSRGKRVDLGCAATCPTV-RTGVDIQCCSTDDCDPFPTRKRP---------------

P82464.1 ---------TICYNHLTRTSETTEICPDSWYFCYKISLADG---NDVRIKRGCTFTCPELRPTGIYVYCCRRDKCNQ-------

P01391.1 ---------IRCFITP---DITSKDCPNGHVCYTKTWCDAFCSIRGKRVDLGCAATCPTVKT-GVDIQCCSTDNCNPFPTRKRP

P0CAR1.1 ---------MICYNQQSSQPPTTKTCSE-GQCYKKTWSDHRGTI----SERGC--ACPNVKP-GVKISCCSSDKCNG-------

P86538.2 ------------LQCNKLVPIASKTCPPGKNLCYKMFMVSD--L-TIPVKRGCIDVCPKNSL-LVKYECCNTDRCN--------

P86382.1 ------------LKCNKLIPLAYKTCPAGKNLCYKMYMVSN--K-TVPVKRGCIDVCPKNSL-VLKYECCNTDRCN--------

P86540.2 ------------LKCNKLIPLAYKTCPAGKDLCYKMYMVSD--K-TVPVKRGCIDVCPKNSL-LVKYECCNTDRCN--------

P24779.1 ------------LKCNKLIPLAYKTCPAGKNLCYKMFMVAA--P-KVPVKRGCIDACPKNSL-LVKYVCCNTDRCN--------

BAU24665.1 VVTIVCLDLGYTLKCNKLVPLFYKTCPAGKNLCYKMYMVAT--P-KVPVKRGCIDVCPKSSL-LVKYVCCNTDRCN--------

P82463.1 ---LT------CVKEKSIFGVTTEDCPDGQNLCFKRWHMIV--PGRYKKTRGCAATCPIAEN-RDVIECCSTDKCNL-------

P85092.1 ---LT------CVTSKSIFGITTEDCPDGQNLCFKRRHYVV--PKIYDSTRGCAATCPIPEN-YDSIHCCKTDKCNE-------

**Cobra venom factor (4 proteins)**

AAX86641.1 MERMALYLVAALLIGFPGSSHGALYTLITPGVLRTDTEEQILVEAHGDSVPKQAVISIHDFPRRQKTLFQTRVDMNPAGGMLVTPTIKIPAKELNKESRQNQYVVVKVSGLPLELEKVVL

AFJ59923.1 MEGMALYLVAALLIGFPGSSHGALYTLITPGVLRTDTEEQILVEAHGDNTPKQLDIFVHDFPRKQKILFQKRVDMNPAGDMLVTPTIKIPAEEVSKDSRQNQYVVVQVTGPQVRLEKVVL

I2C090.1 MEGMALYLVAALLIGFPGSSHGALYTLITPGVLRTDTEEQILVEAHGDNTPKQLDIFVHDFPRKQKILFQKRVDMNPAGDMLVTPTIKIPAEEVSKDSRQNQYVVVQVTGPQVRLEKVVL

Q91132.1 MERMALYLVAALLIGFPGSSHGALYTLITPAVLRTDTEEQILVEAHGDSTPKQLDIFVHDFPRKQKTLFQTRVDMNPAGGMLVTPTIEIPAKEVSTDSRQNQYVVVQVTGPQVRLEKVVL

AAX86641.1 LSYQSGFVFIQTDKGIYTPGSPVRYRVFSMDYNMHRMDKTVIVEFQTPEGVVVSSNPVNPSSVLIRPYNLPELVSFGTWKAVAKYEHSPEESYTAYFDVREYVLPSFEVRLQPSDKFLYI

AFJ59923.1 LSYQSGFVFIQTDKGIYTPGSPVLYRVFSMDHNMRQMDKTVVVEFQTPEGIVVSSNRIDL--NFTRPYNLPELGSLGTWKIVAKYEHSPE-NYTAYFDVRKYVLPSFEVHLQPSEKSFYI

I2C090.1 LSYQSGFVFIQTDKGIYTPGSPVLYRVFSMDHNMRQMDKTVVVEFQTPEGIVVSSNRIDL--NFTRPYNLPELGSLGTWKIVAKYEHSPE-NYTAYFDVRKYVLPSFEVHLQPSEKSFYI

Q91132.1 LSYQSSFLFIQTDKGIYTPGSPVLYRVFSMDHNTSKMNKTVIVEFQTPEGILVSSNSVDL--NFFWPYNLPDLVSLGTWRIVAKYEHSPE-NYTAYFDVRKYVLPSFEVRLQPSEKFFYI

AAX86641.1 DGNKNFHVSITARYLYGKKVEGVAFVLFGVKIDDAKKSIPDSLTRIPIIDGDGEAILKRDTLRSRFQNLNELVGHTLYASVTVMTESGSDMVVTEQSGIHIVTSPYQIYFTKTPKYFKPG

AFJ59923.1 DGNENFHVSITARYLYGEEVEGVAFVLFGVKIDGAKKSIPDSLTRIPILDGDGEATLKRDTLRSRFPNLNELVGHTLYASVTVITESGSDMVATEQSGIHIVTSPYQIYFTKTPKYFKPG

I2C090.1 DGNENFHVSITARYLYGEEVEGVAFVLFGVKIDGAKKSIPDSLTRIPILDGDGEATLKRDTLRSRFPNLNELVGHTLYASVTVITESGSDMVATEQSGIHIVTSPYQIYFTKTPKYFKPG

Q91132.1 DGNENFHVSITARYLYGEEVEGVAFVLFGVKIDDAKKSIPDSLTRIPIIDGDGKATLKRDTFRSRFPNLNELVGHTLYASVTVMTESGSDMVVTEQSGIHIVASPYQIHFTKTPKYFKPG

AAX86641.1 MPYELTVYVTNPDGSPAANVPVVSEAIRSEGTTLSDGTAKLILNTPLNTQSLPITVRTNHRDLPRERQATKSMTATAYQTQGGSGNYLHVAITSAEIKAGDNLPVNFNVRGNANSLNQIK

AFJ59923.1 MPYELTVYVTNPDGSPAAKVPVVSEAIHSEGTTLSDGTAKLILNTPLDTQSLLITVRTNHGDLPRERQATKSMTATAYQTQGGSGNYLHVAITSTEIKPGDNLPVNFNVRGNANSLNQVK

I2C090.1 MPYELTVYVTNPDGSPAAKVPVVSEAIHSEGTTLSDGTAKLILNTPLDTQSLLITVRTNHGDLPRERQATKSMTATAYQTQGGSGNYLHVAITSTEIKPGDNLPVNFNVRGNANSLNQVK

Q91132.1 MPYELTVYVTNPDGSPAAHVPVVSEAFHSMGTTLSDGTAKLILNIPLNAQSLPITVRTNHGDLPRERQATKSMTAIAYQTQGGSGNYLHVAITSTEIKPGDNLPVNFNVKGNANSLKQIK

AAX86641.1 YFTYLILTKGKIFKVGRQPKGEGQNLVTMNLRITPDLIPAFRFVAYYQVGNNEIVADSVWVDVKDTCMGTLVVKGASSRDNRIQKPGAAMKIKLEGDPGARVGLVAVDKAVYVLNDKYKI

AFJ59923.1 YFTYL---------VGRQPKGAGQNLVAMNLRITPDLIPSFRFVAYYQVGNNEIVADSVWVDVKDTCMGTLVVKGASLTDNQIHMPGAAMKIKLEGDPGAQVGLVAVDKAVYVLNDKYKI

I2C090.1 YFTYL---------VGRQPKGAGQNLVAMNLRITPDLIPSFRFVAYYQVGNNEIVADSVWVDVKDTCMGTLVVKGASLTDNQIHMPGAAMKIKLEGDPGAQVGLVAVDKAVYVLNDKYKI

Q91132.1 YFTYLILNKGKIFKVGRQPRRDGQNLVTMNLHITPDLIPSFRFVAYYQVGNNEIVADSVWVDVKDTCMGTLVVKGD----NLIQMPGAAMKIKLEGDPGARVGLVAVDKAVYVLNDKYKI

AAX86641.1 SQAKIWDTIEKSDFGCTAGGGQNNLGVFEDAGLALTTSTNLNTKQRSVATCPQPTNRRRRSSVLLLDSKANKAAQFQDQNLRKCCEDGMHENPMGYTCEKRAKYIQEGDACKAAFLECCR

AFJ59923.1 SQAKIWDTIEKSDFGCTAGGGQNNLGVFEDAGLALTTSTNLNTKQRSDTKCPQPANRRRRSSVLLLDSKASKAAQFQDQDLRKCCEDSMHENPMGYTCEKRAKYIQEGDACKAAFLECCR

I2C090.1 SQAKIWDTIEKSDFGCTAGGGQNNLGVFEDAGLALTTSTNLNTKQRSDTKCPQPANRRRRSSVLLLDSKASKAAQFQDQDLRKCCEDSMHENPMGYTCEKRAKYIQEGDACKAAFLECCR

Q91132.1 SQAKIWDTIEKSDFGCTAGSGQNNLGVFEDAGLALTTSTNLNTKQRSAAKCPQPANRRRRSSVLLLDSNASKAAEFQDQDLRKCCEDVMHENPMGYTCEKRAKYIQEGDACKAAFLECCR

AAX86641.1 YIKGIRDENQRESELFLARSDFEDELFGEDNIISRSDFPESWLWLTEDLKEPPNSQGISSKTLSFYLRDSITTWEVLAVSIAPTKGICVAEPYEITVMKDFFIDLRVPYSVVKNEQVEIR

AFJ59923.1 YIKGILDENQWESGLFLPRNDNEDGFIQDSDIIPRTDFPKSWLWHTVQLTEQPNSNGISSKTMSIYLKESITTWEVLAVSFTPTKGICVAEPYEIKVMKDFFIDLRVPYSVVRKEQVEIR

I2C090.1 YIKGILDENQWESGLFLPRNDNEDGFIQDSDIIPRTDFPKSWLWHTVQLTEQPNSNGISSKTMSIYLKESITTWEVLAVSFTPTKGICVAEPYEIKVMKDFFIDLRVPYSVVRKEQVEIR

Q91132.1 YIKGVRDENQRESELFLARDDNEDGFIADSDIISRSDFPKSWLWLTKDLTEEPNSQGISSKTMSFYLRDSITTWVVLAVSFTPTKGICVAEPYEIRVMKVFFIDLQMPYSVVKNEQVEIR

AAX86641.1 AVLYNYADEDIYVRVELLYNPAFCSASTEGQRYRVQVPVKALSSWAVPFVIVPLEQGLHDVEVKASVRG-ELASDGVRKKLKVVPEGERKNIVTVIELDPSVKGVDGTQEQTVIANKLDD

AFJ59923.1 AVLYNYAGRDIYVRVELLYNPAFCSASTEEQRYRQQFTIKALSSRAVPFVIVPLQQGLHDIEVRASVQGWESVSDGVKKKLKVVPEGVQKCIVTIIKLDPRAKGVDGTQREVVKARKLDD

I2C090.1 AVLYNYAGRDIYVRVELLYNPAFCSASTEEQRYRQQFTIKALSSRAVPFVIVPLQQGLHDIEVRASVQGWESVSDGVKKKLKVVPEGVQKCIVTIIKLDPRAKGVDGTQREVVKARKLDD

Q91132.1 AILHNYVNEDIYVRVELLYNPAFCSASTKGQRYRQQFPIKALSSRAVPFVIVPLEQGLHDVEIKASVQEA-LWSDGVRKKLKVVPEGVQKSIVTIVKLDPRAKGVGGTQLEVIKARKLDD

AAX86641.1 KVPETEIETKISVLGDPVAQIIENSIDGSKLNHLIITPSGCGEQNMITMTPSVIATYYLDATGQWENLGVDRRTEAVKQIMKGYAQQMVYKKADHSYAAFPNRASSSWLTAYVVKVFAMA

AFJ59923.1 KVPDTEIETKITIQADPVAQIIENSIDGSKLNHLIITPSGCGEQNMIRMTAPVIATYYLDTTEQWETLGRNHRNEAVKQIMTGYAQQMVYKKANHSYAAFTNRASSTWLTAYVVKVFAMA

I2C090.1 KVPDTEIETKITIQADPVAQIIENSIDGSKLNHLIITPSGCGEQNMIRMTAPVIATYYLDTTEQWETLGRNHRNEAVKQIMTGYAQQMVYKKANHSYAAFTNRASSTWLTAYVVKVFAMA

Q91132.1 RVPDTEIETKIIIQGDPVAQIIENSIDGSKLNHLIITPSGCGEQNMIRMAAPVIATYYLDTTEQWETLGINRRTEAVNQIVTGYAQQMVYKKADHSYAAFTNRASSSWLTAYVVKVFAMA

AAX86641.1 AKIVKDIKHEIICGGVKWLILNRQQPDGVFKENAPVIHGEMLGGTKGAEPEVSLTAFILTALLESRSVCNEHINILDSSINKAIDYLLKKYEKLQRPYTTALTAYALAAAERLNDDRVLM

AFJ59923.1 TKMVAGISHEIICGGVRWLILNRQQPDGAFKENAPVLSGTMQGGIQGDESEVTVTAFTLVALLESKTICNDSVNSLDSSIKKATDYLLKKYEKLQRPYTTALTAYALAAADRLNDDRVLM

I2C090.1 TKMVAGISHEIICGGVRWLILNRQQPDGAFKENAPVLSGTMQGGIQGDESEVTVTAFTLVALLESKTICNDSVNSLDSSIKKATDYLLKKYEKLQRPYTTALTAYALAAADRLNDDRVLM

Q91132.1 AKMVAGISHEIICGGVRWLILNRQQPDGAFKENAPVLSGTMQGGIQGAEEEVYLTAFILVALLESKTICNDYVNSLDSSIKKATNYLLKKYEKLQRPYTTALTAYALAAADQLNDDRVLM

AAX86641.1 AASTGRDRWEEHNARTHNIEGTSYALLALLKMKKFAEAGPVVKWLIDQKYYGGTYGQTQATVMVFQALAEYEIQIPTHKDLNLDISINLPEREVPLRYSINYGNALVARTAETKLNEDFT

AFJ59923.1 AASTGKNRWEEYNAHTHNVEGTSYALLALLKMKKFDQTGPIVRWLTDQNFYGGTYGQTQATVMLFQALAEYKIQMPTHKDLNLDIIIKLPERELPLHYRLDATNAILARTAETKLNQDFT

I2C090.1 AASTGKNRWEEYNAHTHNVEGTSYALLALLKMKKFDQTGPIVRWLTDQNFYGGTYGQTQATVMLFQALAEYKIQMPTHKDLNLDIIIKLPERELPLHYRLDATNAILARTAETKLNQDFT

Q91132.1 AASTGRDHWEEYNAHTHNIEGTSYALLALLKMKKFDQTGPIVRWLTDQNFYGETYGQTQATVMAFQALAEYEIQMPTHKDLNLDITIELPDREVPIRYRINYENALLARTVETKLNQDIT

AAX86641.1 VSASGDGKATMTILTVYNAQLREDANVCNKFHLDVSVENAQLNSKQAKGAKDTLRLKICTRYLGEVDSTMTIIDVSMLTGFLADAEDLTRLSKGVDRYISKFEIDNNMVQKGTVVIYLDK

AFJ59923.1 VSASGDGTATMTILTVYNAQLQEKANVCNKFHLDVSVENIHLNFKHAKGAKGALMLKICMRYLGEVDSTMTIIDISMLTGFLPDAEDLTRLSEGVDRYISRYEVDNNMAQKVAVIIYLDK

I2C090.1 VSASGDGTATMTILTVYNAQLQEKANVCNKFHLDVSVENIHLNFKHAKGAKGALMLKICMRYLGEVDSTMTIIDISMLTGFLPDAEDLTRLSEGVDRYISRYEVDNNMAQKVAVIIYLDK

Q91132.1 VTASGDGKATMTILTFYNAQLQEKANVCNKFHLNVSVENIHLN---AMGAKGALMLKICTRYLGEVDSTMTIIDISMLTGFLPDAEDLTRLSKGVDRYISRYEVDNNMAQKVAVIIYLNK

AAX86641.1 VSHSEVECLHFKIHKHFEVGFIQPGSVKVYSYYNLDEQCTKFYHPDKGTGLLNKICHGNICRCAEESCSLLNQQKKIDLQLRIQKACAPNVDYVYKTKLLQIEEKDGNDIYVMDVLEVIK

AFJ59923.1 VSHSEDECLQFKILKHFEVGFIQPGSVKVYSYYNLDEQCTKFYHPDKGTGLLNKICVGNICRCAAETCSLLSQQEKIDLPLRIQKACASNVDYVYKTKLLRIEEKDGYDIYVMDVLEVIK

I2C090.1 VSHSEDECLQFKILKHFEVGFIQPGSVKVYSYYNLDEQCTKFYHPDKGTGLLNKICVGNICRCAAETCSLLSQQEKIDLPLRIQKACASNVDYVYKTKLLRIEEKDGYDIYVMDVLEVIK

Q91132.1 VSHSEDECLHFKILKHFEVGFIQPGSVKVYSYYNLDEKCTKFYHPDKGTGLLNKICIGNVCRCAGETCSSLNHQERIDVPLQIEKACETNVDYVYKTKLLRIEEQDGNDIYVMDVLEVIK

AAX86641.1 GGTDRNPQAKARQYVSQRKCQEALNLKLNNDYLIWGLSSDLWPRKNDISYLITKNTWIERWPNEDECQDEEFQNLCDDFAQLSNTLTIFGCPT

AFJ59923.1 PGTDENPQANARQYISQRKCQEALNLNVNDDYLIWGLRSDLWPMKDKFSYLITKNTWIERWPHEDECQDEEFQNLCLDFAHLSNILTIFGCPT

I2C090.1 PGTDENPQANARQYISQRKCQEALNLNVNDDYLIWGLRSDLWPMKDKFSYLITKNTWIERWPHEDECQDEEFQNLCLDFAHLSNILTIFGCPT

Q91132.1 QGTDENPRAKTHQYISQRKCQEALNLKVNDDYLIWGSRSDLLPTKDKISYIITKNTWIERWPHEDECQEEEFQKLCDDFAQFSYTLTEFGCPT

**Cysteine-rich secretory protein (4 proteins)**

P84808.1 MIAFIVLLSLAAVLQQSSGTVDFASESSNKRENQKQIVDKHNALRRSVRPTARNMLQMEWNSNAAQNAKRWADRCSFAHSPPHLRTVGKIGCGENLFMSSQPYAWSRVIQSWYDENKKFV

Q7T1K6.1 MIAF-SLLCLAAVLRQSFGNVDFNSESTRRKKKQKEIVDLHNSLRRRVSPTASNMLKMEWYPEAASNAERWANTCSLNHSPDNLRVLEGIQCGESIYMSSNARTWTEIIHLWHDEYKNFV

P0DL16.1 -------------------NVDFNSESTRRKKKQNEIVDLHNSLRRTVN-----------------------------------------------------------------------

P84807.1 -------------------DVDFNSESTRRKNKQKEIVDLHNSLKKTV------------------------------------------------------------------------

P84808.1 YGVGANPPGSVIGHYTQIVWYNSHLLGCGAAKCSSS--KYLYVCQYCPAGNIIGSIATPYKSGPPCGDCPSACVNGLCTNPCKHHNVFSNCQSLAKQNACQTEWMKSKCAASCFCRTEII

Q7T1K6.1 YGVGANPPGSVTGHYTQIVWYQTYRAGCAVSYCPSSAWSYFYVCQYCPSGNFQGKTATPYKLGPPCGDCPSACDNGLCTNPCTIYNKLTNCDSLLKQGSCQDDWIKSNCPASCFCRNKII

P0DL16.1 ------------------------------------------------------------------------------------------------------------------------

P84807.1 ------------------------------------------------------------------------------------------------------------------------

**Kunitz-type serine protease inhibitor (1 protein)**

P20229.1 RPGFCELPAAKGLCKAHKPAFYYNKDSHRCQKFIYGGCGGNANRFRTIDECNRTCVG

**Ohanin Like Protein (1 protein)**

P82885.1 SPPGNWQKADVTFDSNTAFESLVVSPDKKTVENVGVSQVAPDNPERFDGSPCVLGSPGFRSGKHFFEVKYGTQREWAVGLAGKSVKRKGYLRLVPEERIWQKGLWWLG

**Nerve Growth Factor (2 proteins)**

Q5YF89.1 -----MSMLCYTLITAFLIGIWAAPKSEDNVPLGSPATSDLSDTSCAQTHEGLKTSRNTDQRHPAPQKAEDQELRTAANIIVDPKLFQKRQFQSPRVLFSTQPPLLSRDEESVEFLDNED

A59218 MVHSVMSMLCYTLIIAFLIGIWAAPKSEDNVPLGSPATSDLSDTSCAQTHEGLKTSRNTDQHHPAPQKAEDQELRTAANIIVDPKLFQKRQFQSPRVLFSTQPPLLSRDEESVEFLDNED

Q5YF89.1 SLNRNIRAKREDHPVHNLGEHSVCDSVSAWVTKTTATDIKGNTVTVMENVNLDNKVYKQYFFETKCKNPNPVPSGCRGIDSSHWNSYCTETDTFIKALTMEGNQASWRFIRIDTACVCVI

A59218 SLNRNIRAKREDHPVHNLGEHSVCDSVSAWVTKTTATDIKGNTVTVMENVNLDNKVYKQYFFETKCKNPNPEPSGCRGIDSSHWNSYCTETDTFIKALTMEGNQASWRFIRIETACVCVI

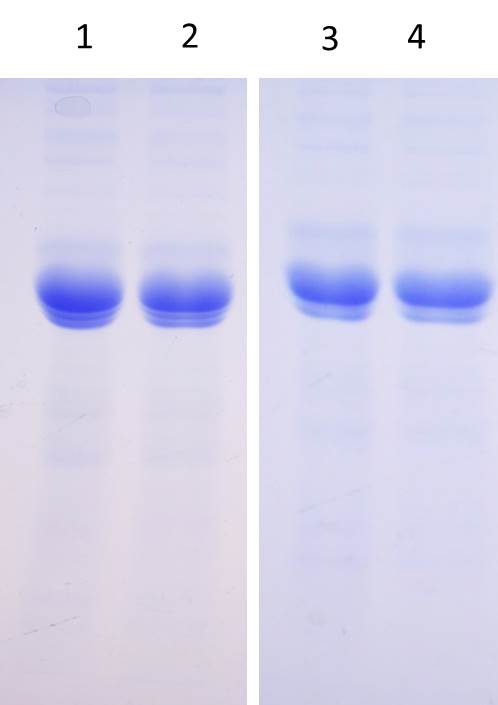
Q5YF89.1 TKKTGN

A59218 TKKKGN

**Cystatin (1 protein)**

ACR83850.1 MVHFQLPVAAPLCLLCALLLLPSATMIPGGLSPRSVSDPDVQKAAAFAVQEYNARSANAHYYKELRVVEAQSQVVAGEKYYLMMELVKTKCAKTAGKPKVYKEIQNCELPPKAQQEKLTCHFQVWSRPWLDKTELTKMSCN

**Supplementary Fig S2**: Fibrino(geno)lytic activity of WI *N. naja* venom: Lane 1: Control fibrin; 2: Fibrin incubated with WINnV for 3 h at 37 °C; 3: Control fibrinogen; 4: Fibrinogen incubated with WINnV for 3 h at 37 °C.



**Supplementary Fig S3 (a)**: Dose-dependent (5 to 40 μg/ml) calcium-clotting time of PPP by WI *N. naja* venom. The Ca2+ clotting time of control PPP was recorded as 203.7 ± 3.06. Values are mean ± SD of triplicate determinations.



**Supplementary Fig S3 (b)**: Dose-dependent (5 to 40 μg/ml) PT and APTT of PPP by WI *N. naja* venom. The PT and APTT of control PPP was recorded as 22.7 ± 1.1 and 60.3 ± 0.6, respectively. Values are mean ± SD of triplicate determinations.



**Supplementary Fig S3 (c)**. Dose-dependent (5 to 40 μg/ml) platelet modulating effect of WI *N. naja* venom against platelet rich plasma (PRP). Values are mean ± SD of triplicate determinations.



**Supplementary Fig S4**: 15% SDS-PAGE analysis of WINnV unbound and bound fractions eluted from mock matrices and naïve horse IgG coupled immuno-affinity column. Lanes 1 and 2 represent molecular weight markers and WINnV, respectively. Lanes 3 and 5 represent unbound fractions of WINnV eluted with 5CV of 1X PBS, pH 7.4 from mock matrix and naïve horse IgG coupled immuno-affinity column, respectively. Lanes 4 and 6 represent bound fractions of WINnV eluted with 5CV of 0.1 M glycine, pH 2.0 from mock matrix and naïve horse IgG coupled immuno-affinity column, respectively.



**Supplementary table S1.** List of ions detected in WINnV by MALDI-TOF-MS analysis. The analysis was performed in the following three m/z ranges: 5 to 20 Da, 21 to 40 Da, 41 to 100 Da. and >100 kDa

|  |  |
| --- | --- |
| **m/z ranges** | **m/z of the ions detected in WINnV** |
| 5 - 20 kDa  (31 entries) | 5003.848, 5124.306, 5240.109, 5354.129, 5480.271, 5592.933, 5708.331, 5930.517, 6063.248, 6230.609, 6378.396, 6550.029, 6730.270, 6852.332, 7003.770, 7930.517, 11044.885, 11200.240, 11691.031, 12256.363, 12518.719, 12996.827, 13281.524, 13485.775, 13764.644, 14018.946, 14381.413, 14595.848, 17110.511, 17962.318, 18949.213 |
| 21- 40 kDa  (44 entries) | 20066.083, 20419.972, 21551.281, 22317.265, 22451.207, 22617.325, 22808.811, 23345.739, 23555.630, 23750.756, 24133.744, 24611.753, 25371.899, 25607.926, 25964.336, 26529.283, 26787.938, 26978.420, 27108.321, 27230.184, 27606.564, 27720.754, 28313.030, 28615.997, 29172.643, 30891.928, 31320.528, 31836.885, 31980.096, 33037.532, 34053.743, 34543.099, 34956.874, 35581.287, 36422.740, 36737.094, 37193.451, 37471.145, 38046.393, 38180.564, 38750.841, 39231.070, 39365.296, 40379.872 |
| 41- 100 kDa  (109 entries) | 41083.128, 41665.541, 41804.391, 43853.183, 44118.830, 44406.470, 44832.756, 45223.899, 45688.042, 45892.417, 46003.442, 46849.352, 47043.038, 47169.910, 47700.611, 48440.565, 48979.033, 49106.643, 49435.518, 49802.823, 50167.679, 50452.553, 50834.986, 52363.080, 52677.131, 52872.312, 53005.647, 53080.133, 53370.467, 53666.406, 53972.773, 54699.369, 55071.432, 55260.793, 55559.884, 55781.857, 56195.254, 56347.444, 56624.951, 57115.206, 57622.484, 57879.959, 58056.977, 58313.908, 58748.005, 59029.164, 59314.820, 59481.897, 59845.603, 59974.426, 60374.853, 60873.506, 61541.779, 61801.660, 62501.504, 62982.388, 63115.396, 63245.280, 63647.233, 64425.504, 65355.902, 65504.971, 67058.202, 67418.900, 67900.396, 68357.736,, 69369.315, 69791.341, 71865.679, 72731.310, 72945.891, 73074.792, 75051.151, 75899.801, 76012.770, 76338.626, 76701.328, 78178.836, 79117.687, 79715.452, 80646.477, 81825.524, 82523.804, 83948.075, 84112.873, 84376.824, 84964.380, 86345.148, 86592.471, 87330.070, 87660.676, 88176.460, 88665.544, 88981.808, 89554.876, 89886.283, 92145.957, 92307.124, 93942.894, 94026.632, 94416.379, 95792.656, 95839.521, 96880.072, 97044.070, 97658.226, 98051.728, 98489.506, 99623.239 |
| >101 kDa  (30 entries) | 102205.071, 102886.633, 105543.928, 106457.716, 108404.723, 112482.762, 112666.847, 115087.454, 115370.101, 116038.884, 117054.818, 121592.514, 121873.796, 122703.975, 123169.940, 124953.545, 125211.994, 126215.896, 130713.572, 137552.336, 139847.140, 141727.301, 141887.598, 142506.001, 143451.668, 143717.441, 146079.998, 147883.159, 148579.891, 148695.321 |

**Supplementary table S2:** List of orthologous proteins of WI *N. naja* venom toxins identified by tandem mass spectroscopy analysis of SDS-PAGE bands of gel filtration fractions against Elapidae database. The table shows the identified peptide ions, their mass, charge (z), score for the ID, ΔM (ppm), modified residues. Ca, and O, represents carbamidomethylation and oxidation, respectively and are represented in lower cases.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Accession** | **-10lgP** | **Coverage (%)** | **#Peptides** | **#Spectra** | **Avg. Mass (Da)** | **Description [Source organism]** | **Peptide** | **-10lgP** | **#Spectra** | **Mass** | **z** | **ppm** | **Modified residues** |
| **Enzymatic Proteins** | | | | | | | | | | | | | |
| **Phospholipase A2** | | | | | | | | | | | | | |
| AAR16428.1 | 173.8 | 52 | 10 | 21 | 14198 | phospholipase A2 [*Naja sagittifera*] | (R)GGSGTPVDDXDR(C) | 70.0 | 4 | 1187.5 | 2 | 0.0 |  |
|  |  |  |  |  |  |  | (-)NXYBFBNmXBcTVPSR(S) | 68.5 | 2 | 2014.0 | 2 | 0.8 | O (M8); Ca(C11) |
|  |  |  |  |  |  |  | (K)TYTYEcSBGTXTCBGR(N) | 26.7 | 1 | 1866.8 | 2 | -5.2 | Ca (C6) |
| P15445.1 | 200.24 | 85 | 12 | 36 | 13346 | Acidic phospholipase A2 2 [*Naja naja*] | (R)LAAIcFAGAPYNDNNYNIDLK(A) | 78.51 | 1 | 2356.1 | 2 | 7.5 | Ca (C5) |
|  |  |  |  |  |  |  | (K)TYSYEcSQGTLTcK(G) | 73.86 | 1 | 1696.7 | 2 | 0.3 | Ca (C5, C12) |
|  |  |  |  |  |  |  | (K)GDNNAcAASVcDcDR(L) | 71.26 | 4 | 1683.6 | 2 | 1.4 | Ca (C6, C11, C13) |
|  |  |  |  |  |  |  | (K)ISGcWPYFK(T) | 61.79 | 8 | 1156.5 | 2 | -0.1 | Ca (C4) |
|  |  |  |  |  |  |  | (R)GGSGTPVDDLDR(C) | 54.66 | 3 | 1187.5 | 2 | -0.1 |  |
|  |  |  |  |  |  |  | (R)SWWDFADYGcYcGR(G) | 43.14 | 2 | 1841.6 | 2 | 2 | Ca (C10,C12) |
|  |  |  |  |  |  |  | (-)NLYQFKNMIKcTVPSR(S) | 28.37 | 1 | 1998.0 | 3 | -0.1 | Ca (C11) |
| **Phospholipase B** | | | | | | | | | | | | | |
| F8J2D3.1 | 115.8 | 10 | 3 | 4 | 64103 | Phospholipase-B 81 *[Drysdalia coronoides*] | (K)YGXDFSYEMAPR(A) | 85.4 | 1 | 1447.6 | 2 | 0.2 |  |
|  |  |  |  |  |  |  | (K)QNSGTYNNBYMXXDTBK(I) | 36.7 | 1 | 2017.0 | 3 | 0.4 |  |
|  |  |  |  |  |  |  | (R)SXEDGTXYXXEBVPNXVEYSDBTTXXR(K) | 36.2 | 1 | 3108.6 | 3 | 0.4 |  |
| **Nucleotidase** | | | | | | | | | | | | | |
| JAI09047.1 | 282.7 | 31 | 26 | 52 | 62983 | Ecto-5'-nucleotidase 1c [*Micrurus fulvius*] | (R)HGBGTGEXXBVSGXK(V) | 96.1 | 2 | 1522.8 | 2 | 0.5 |  |
|  |  |  |  |  |  |  | (R)YDAMAXGNHEFDNGXNGXXDPXXK(N) | 94.7 | 2 | 2629.3 | 2 | 4.8 |  |
|  |  |  |  |  |  |  | (I)XXNVGSEBVGXXGYTTK(E) | 69.6 | 2 | 1791.0 | 2 | -0.1 |  |
|  |  |  |  |  |  |  | (K)ASGNPXXXNBSXBEDPAVK(A) | 67.9 | 1 | 1993.1 | 2 | 1.6 |  |
|  |  |  |  |  |  |  | (K)ETPVXSNPGPYXEFRDEVEEXBK(Q) | 65.2 | 1 | 2688.3 | 2 | 2.6 |  |
|  |  |  |  |  |  |  | (R)QVPVVBAYAFGK(Y) | 63.9 | 3 | 1305.7 | 2 | 0.5 |  |
|  |  |  |  |  |  |  | (K)VXXPSFXAAGGDGYYmXK(G) | 59.8 | 2 | 1930.0 | 2 | 3.3 | O(M16) |
|  |  |  |  |  |  |  | (K)NVBFPXXSANXRPK(G) | 55.6 | 2 | 1596.0 | 2 | 0.4 |  |
|  |  |  |  |  |  |  | (K)GREVVHFMNSXR(Y) | 47.2 | 1 | 1443.7 | 3 | -0.7 |  |
|  |  |  |  |  |  |  | (N)XSGYXXPYBXXNVGSEK(V) | 47.0 | 1 | 1893.1 | 2 | 3.0 |  |
|  |  |  |  |  |  |  | (A)GSFBXTXXHTNDVHAR(V) | 30.3 | 1 | 1808.0 | 4 | -0.3 |  |
| **Phosphodiesterase** | | | | | | | | | | | | | |
| JAI09046.1 | 281.9 | 28 | 31 | 75 | 96652 | Phosphodiesterase [*Micrurus fulvius*] | (K)cSSXTDXEAVNBR(L) | 80.7 | 4 | 1491.7 | 2 | 0.2 | Ca(C1) |
|  |  |  |  |  |  |  | (R)XWNYFHSTXXPK(Y) | 74.7 | 8 | 1517.8 | 2 | 0.0 |  |
|  |  |  |  |  |  |  | (R)AEYXETWDTXmPNXNK(L) | 74.5 | 2 | 1952.9 | 2 | 1.0 | O(M11) |
|  |  |  |  |  |  |  | (K)YXSAYSBDXXMPXWNSYTXSK(S) | 73.2 | 2 | 2492.2 | 2 | 3.5 |  |
|  |  |  |  |  |  |  | (K)AATYFWPGSEVK(I) | 68.6 | 1 | 1354.7 | 2 | 1.4 |  |
|  |  |  |  |  |  |  | (K)NPFYNPSPAK(E) | 65.0 | 6 | 1133.6 | 2 | -0.1 |  |
|  |  |  |  |  |  |  | (R)ABRPDFSTXYXEEPDTTGHK(Y) | 56.5 | 3 | 2304.1 | 3 | 0.2 |  |
|  |  |  |  |  |  |  | (R)TXGmXMEGXBBR(N) | 56.5 | 2 | 1391.7 | 2 | 0.2 |  |
|  |  |  |  |  |  |  | (R)SBNVPBDFYTFDSEAXVK(N) | 53.7 | 1 | 2087.1 | 3 | 0.0 |  |
|  |  |  |  |  |  |  | (K)SXBmADRTXGMXMEGXK(Q) | 52.8 | 1 | 1908.9 | 3 | 0.1 | O(M4) |
|  |  |  |  |  |  |  | (N)TPXNcPPGSXK(V) | 51.1 | 1 | 1182.6 | 2 | -0.5 | Ca(C5) |
|  |  |  |  |  |  |  | (K)YBYcSGGTHGYDNEFK(S) | 50.3 | 2 | 1924.8 | 3 | -0.2 | Ca(C3) |
|  |  |  |  |  |  |  | (R)NXHNcVNXXXXADHGMEAXScNR(L) | 49.5 | 1 | 2663.3 | 3 | 0.7 | Ca(C5) |
|  |  |  |  |  |  |  | (R)MANVXcScSEDcXTBK(D) | 46.1 | 1 | 1914.8 | 3 | -0.9 | Ca(C6,C8,C12) |
|  |  |  |  |  |  |  | (R)XDBVNXMVDRBWXAVR(N) | 44.6 | 2 | 1955.1 | 3 | -0.1 |  |
|  |  |  |  |  |  |  | (K)VXSFXXPHRPDNSEScADK(S) | 43.6 | 1 | 2184.1 | 3 | 0.2 | Ca(C16) |
| **Snake venom metalloprotease** | | | | | | | | | | | | | |
| D3TTC2.1 | 216.0 | 22 | 14 | 29 | 69181 | Zinc metalloproteinase-disintegrin-like atragin [Naja atra] | (R)AABDDcDXPEXcTGBSAEcPTDVFBR(N) | 71.3 | 1 | 2982.3 | 3 | -0.9 | Ca(C6,C12,C19) |
|  |  |  |  |  |  |  | (K)cPXmTNBcXAXRGPGVK(V) | 32.7 | 1 | 1930.0 | 3 | 0.6 | Ca(C1, C8); O (M4) |
| ACN50005.1 | 211.9 | 17 | 11 | 16 | 66292 | K-like metalloprotease [*Naja atra*] | (K)GcFDXNmRGDDGSFcR(M) | 49.4 | 1 | 1921.8 | 3 | 0.4 | Ca(C2, C15); O (M7) |
|  |  |  |  |  |  |  | (R)VABDDcDXPEXcTGBSAEcPTDSXBR(N) | 31.9 | 1 | 2964.3 | 3 | 0.4 | Ca(C6,C12,C19) |
| D5LMJ3.1 | 192.9 | 10 | 10 | 48 | 68254 | metalloproteinase atrase A [*Naja atra*] | (R)TRVYEMVNYXNTBYR(R) | 65.2 | 2 | 1949.0 | 3 | 0.2 |  |
|  |  |  |  |  |  |  | (W)GSVAVVBDYSR(R) | 57.1 | 8 | 1179.6 | 2 | 0.4 |  |
|  |  |  |  |  |  |  | (R)ERPBCXXNBPSR(K) | 41.0 | 1 | 1439.8 | 3 | 1.3 |  |
|  |  |  |  |  |  |  | (K)SFAEWR(A) | 35.4 | 5 | 794.4 | 2 | 3.8 |  |
|  |  |  |  |  |  |  | (K)TGcXVPVSPRDPDSR(M) | 33.3 | 2 | 1654.8 | 3 | 1.9 | Ca(C3) |
| AAF00693.1 | 327.2 | 36 | 30 | 126 | 67662 | cobrin precursor [*Naja naja*] | (R)KRNDNABXXTGXDFNGTPVGXAYXGSXcNPK(T) | 100.5 | 1 | 3345.7 | 3 | 3.7 | Ca(C28) |
|  |  |  |  |  |  |  | (K)TSAAVVBDYSK(S) | 79.8 | 23 | 1167.6 | 2 | 0.1 |  |
|  |  |  |  |  |  |  | (R)XNFHXAXXGXEXWSNXNEXNVBSDVK(A) | 79.3 | 1 | 2978.6 | 3 | 1.0 |  |
|  |  |  |  |  |  |  | (R)DPSYGMVEPGTK(C) | 67.0 | 1 | 1279.6 | 2 | 0.1 |  |
|  |  |  |  |  |  |  | (K)ATXDXFGEWREK(K) | 65.0 | 13 | 1463.7 | 2 | 3.7 |  |
|  |  |  |  |  |  |  | (K)YXEFYmVVDNXmYR(H) | 64.4 | 2 | 1886.9 | 2 | 4.1 | O (M6,M12) |
|  |  |  |  |  |  |  | (R)NSmXcNcSXSPR(D) | 61.8 | 3 | 1453.6 | 2 | 1.3 | O(M3); Ca(C5,C7) |
|  |  |  |  |  |  |  | (K)VSRDScFTXNBR(T) | 54.3 | 5 | 1481.7 | 3 | -0.4 | Ca(C6) |
|  |  |  |  |  |  |  | (K)RBVYEMXNTMNmXYR(R) | 41.2 | 1 | 1977.0 | 3 | 0.2 | O (M12) |
|  |  |  |  |  |  |  | (K)TSXXTNTPEBDRYXBAEK(Y) | 38.7 | 1 | 2106.1 | 3 | -0.5 |  |
|  |  |  |  |  |  |  | (R)RTBPAYBFSScSVREHBR(Y) | 28.7 | 1 | 2236.1 | 4 | -0.3 | Ca(C11) |
|  |  |  |  |  |  |  | (R)NBXVXBR(K) | 26.9 | 1 | 869.5 | 2 | 0.1 |  |
|  |  |  |  |  |  |  | (K)KXXPR(K) | 24.0 | 2 | 625.4 | 2 | 0.6 |  |
|  |  |  |  |  |  |  | (R)KXPcAAK(D) | 23.7 | 1 | 786.4 | 2 | 0.4 | Ca(C4) |
| ACN50006.1 | 296.1 | 21 | 18 | 72 | 69181 | atragin precursor [*Naja atra*] | (R)DPNYGmVEPGTBCG(D) | 32.9 | 1 | 1482.6 | 2 | -1.5 | O (M6) |
| P82942.1 | 246.7 | 26 | 17 | 38 | 44493 | Hemorrhagic metalloproteinase-disintegrin-like kaouthiagin [Naja kaouthia] | (K)XRVYEMXNAVNTK(F) | 85.7 | 1 | 1549.8 | 2 | 0.7 |  |
|  |  |  |  |  |  |  | (K)YXEFYVXVDNR(M) | 59.5 | 4 | 1429.7 | 2 | 4.2 |  |
|  |  |  |  |  |  |  | (R)VYEMXNAVNTBFRPXK(I) | 48.6 | 1 | 1922.0 | 3 | 1.2 |  |
|  |  |  |  |  |  |  | (K)RTAPAFBFSScSXRDYBEYXXR(D) | 46.1 | 1 | 2707.3 | 3 | 5.4 | Ca(C11) |
|  |  |  |  |  |  |  | (R)YYNYDBPAXBXR(V) | 45.8 | 1 | 1542.8 | 3 | -0.5 |  |
|  |  |  |  |  |  |  | (K)SFREWRBTVXXPR(K) | 32.7 | 1 | 1686.9 | 3 | -1.6 |  |
| ADG02948.1 | 266.4 | 13 | 11 | 29 | 66246 | metalloproteinase atrase B [*Naja atra*] | (R)KRNDNABXXTGXDFNGNTVGR(A) | 84.3 | 3 | 2302.2 | 3 | -0.1 |  |
| AAM51550.1 | 143.7 | 7 | 5 | 9 | 68176 | mocarhagin 1 *[Naja mossambica]* | (R)RVYEMVNAXNTMYR(R) | 78.5 | 2 | 1758.9 | 2 | 0.5 |  |
|  |  |  |  |  |  |  | (R)DRPBcXXNBPSR(K) | 28.0 | 1 | 1482.8 | 3 | -0.6 | Ca(C5) |
| JAS05092.1 | 70.6 | 8 | 4 | 4 | 68997 | Metalloproteinase type III 2 *[Micrurus tener]* | (R)AABDDcDXPEFcTGR(S) | 33.5 | 1 | 1753.7 | 2 | 2.9 | Ca(C6,C12) |
|  |  |  |  |  |  |  | (R)DRPBcXXNBPX(S) | 28.5 | 1 | 1352.7 | 2 | 0.3 | Ca(C5) |
|  |  |  |  |  |  |  | (E)cPTDSFBR(N) | 24.9 | 1 | 1009.4 | 2 | -1.0 | Ca(C1) |
| **Snake venom serine protease** | | | | | | | | | | | | | |
| ABN72541.1 | 174.2 | 16 | 5 | 9 | 31137 | putative serine protease *[Naja atra]* | (K)XGVHNVHVHYEDEBXRVPK(E) | 88.0 | 3 | 2268.2 | 2 | -0.8 |  |
|  |  |  |  |  |  |  | (D)GBXBGXVSWGR(F) | 36.9 | 1 | 1199.6 | 2 | 0.1 |  |
| **L-amino acid oxidase** | | | | | | | | | | | | | |
| A8QL58.1 | 262.6 | 29 | 24 | 29 | 51439 | L-amino acid oxidase *[Naja atra]* | (A)DXVXNDXSXXHDXPBR(R) | 66.8 | 1 | 1860.0 | 2 | 6.5 |  |
|  |  |  |  |  |  |  | (K)HVVVVGAGMAGXSAAYVXAGAGHBVTXXEASER(V) | 64.4 | 1 | 3232.7 | 4 | 6.3 |  |
|  |  |  |  |  |  |  | (K)REXBAXcYPSXBK(W) | 49.2 | 2 | 1604.9 | 3 | -0.4 | Ca(C7) |
|  |  |  |  |  |  |  | (K)VTXXEASERVGGR(V) | 48.9 | 2 | 1385.8 | 2 | -0.3 |  |
|  |  |  |  |  |  |  | (R)RXYFEPPXPPBK(A) | 42.6 | 1 | 1483.9 | 3 | -1.1 |  |
|  |  |  |  |  |  |  | (K)FGXBXNEFFBENENAWYYXNNXR(K) | 40.9 | 1 | 2921.4 | 3 | -0.5 |  |
|  |  |  |  |  |  |  | (K)TFVTADYVXVcSTSR(A) | 40.3 | 1 | 1717.8 | 2 | 2.8 | Ca(C11) |
|  |  |  |  |  |  |  | (K)STTDXPSR(F) | 39.3 | 1 | 875.4 | 2 | 0.4 |  |
| **Aminopeptidase** | | | | | | | | | | | | | |
| JAB54710.1 | 169.9 | 8 | 7 | 8 | 112194 | aminopeptidase N *[Micrurus fulvius]* | (R)ABXXDDAFNXAR(A) | 76.4 | 1 | 1345.7 | 2 | -0.4 |  |
|  |  |  |  |  |  |  | (R)TWXEEBTEYXVVK(L) | 69.9 | 2 | 1636.9 | 2 | -0.7 |  |
|  |  |  |  |  |  |  | (A)DNADVGFGSATR(A) | 59.5 | 1 | 1208.5 | 2 | -0.7 |  |
|  |  |  |  |  |  |  | (K)SYFETYBYK(N) | 56.5 | 1 | 1227.5 | 2 | -0.4 |  |
|  |  |  |  |  |  |  | (R)SAXYcSAXR(N) | 51.3 | 1 | 1039.5 | 2 | -0.1 | Ca(C5) |
|  |  |  |  |  |  |  | (R)mXSEFXTEPVFR(E) | 36.7 | 1 | 1483.7 | 2 | -1.3 | O(M1) |
|  |  |  |  |  |  |  | (R)EYXPWDTAXDNXDYFR(L) | 26.7 | 1 | 2029.9 | 2 | 4.0 |  |
| **Acetylcholinesterase** | | | | | | | | | | | | | |
| JAA74736.1 | 93.0 | 9 | 2 | 3 | 60425 | ACN-Den-1 *[Denisonia devisi]* | (S)AVTXFGESAGAASVGMHXXSTBSR(A) | 65.5 | 1 | 2389.2 | 2 | 5.7 |  |
|  |  |  |  |  |  |  | (R)VGAFGFXGXPGSPEAPGNmGXXDBR(R) | 43.9 | 1 | 2515.3 | 3 | 3.9 | O(M19) |
| **Non-enzymatic proteins** | | | | | | | | | | | | | |
| **Three Finger Toxins** | | | | | | | | | | | | | |
| AAK49439.1 | 93.0 | 32 | 3 | 3 | 9054 | cardiotoxin *[Naja sputatrix]* | (K)MYMVATPK(V) | 50.2 | 1 | 939.5 | 2 | 2.6 |  |
|  |  |  |  |  |  |  | (K)XVPXFYBTcPAGK(N) | 43.2 | 1 | 1492.8 | 2 | 1.0 | Ca (C9) |
| P86382.1 | 135.0 | 60 | 8 | 8 | 6791 | Cytotoxin 1 *[Naja naja]* | (K)mYmVSNBTVPVBR(G) | 44.1 | 1 | 1583.8 | 3 | -0.6 | O(M1,M3) |
|  |  |  |  |  |  |  | (K)NXcYBmYmVSNK(T) | 37.5 | 1 | 1581.7 | 2 | -1.0 | Ca (C4); O(M7,M9) |
| P86538.2 | 150.1 | 82 | 5 | 5 | 6711 | Cytotoxin 2a *[Naja naja]* | (K)NSXXVBYEccNTDRcN(-) | 70.2 | 1 | 2044.9 | 2 | 3.0 | Ca(C10,C11) |
|  |  |  |  |  |  |  | (-)XBcNBXVPXASK(T) | 53.4 | 1 | 1369.8 | 2 | 0.6 | Ca (C3) |
|  |  |  |  |  |  |  | (K)MFMVSDXTXPVBR(G) | 37.4 | 1 | 1535.8 | 3 | 7.6 |  |
| AAD40974.1 | 42.1 | 13 | 1 | 2 | 11269 | long neurotoxin precursor *[Pseudonaja textilis]* | (R)VDXGCAATCPTPK(K) | 42.1 | 1 | 1274.6 | 2 | 1.7 |  |
| P24779.1 | 149.8 | 70 | 8 | 11 | 6654 | Cytotoxin 5 [*Naja kaouthia*] | (K)mFMVAAPK(V) | 47.4 | 1 | 909.4 | 2 | -1.1 | O(M1) |
|  |  |  |  |  |  |  | (K)XXPXAYBTCPAGK(N) | 39.3 | 1 | 1487.8 | 2 | -0.3 |  |
|  |  |  |  |  |  |  | (K)RGCXDACPBNSXXVK(Y) | 32.7 | 1 | 1615.9 | 2 | -4.2 |  |
| JAB52868.1 | 51.1 | 9 | 1 | 3 | 9596 | three-finger toxin 12 *[Micrurus fulvius]* | (R)WHMXVPGR(Y) | 51.1 | 2 | 994.5 | 2 | -0.7 |  |
| ABK63537.1 | 37.2 | 11 | 1 | 2 | 10289 | LNTX-1 precursor *[Notechis scutatus]* | (K)TWcDAFcSSR(G) | 37.2 | 2 | 1288.5 | 2 | 0.6 | Ca(C4,C8) |
| JAA74929.1 | 54.7 | 13 | 1 | 1 | 12174 | 3FTx-Pse-116 *[Pseudonaja modesta]* | (R)VDXGcAATCPTTDK(T) | 54.7 | 1 | 1450.6 | 2 | 5.3 | Ca(C5) |
| P25669.1 | 179.5 | 69 | 9 | 42 | 7821 | Long neurotoxin 2 *[Naja naja]* | (R)GBRVDXGcAATcPTVR(T) | 73.3 | 2 | 1759.9 | 2 | 0.0 | Ca(C8,C12) |
|  |  |  |  |  |  |  | (K)TWcDGFcSSR(G) | 54.8 | 2 | 1274.5 | 2 | 0.0 | Ca(C4,C8) |
|  |  |  |  |  |  |  | (-)XRcFXTPDXTSBDcPNGHVcYTK(T) | 36.7 | 1 | 2781.3 | 4 | -0.2 | Ca(C3,C14,C20) |
| P86540.2 | 188.2 | 92 | 12 | 23 | 6793 | Cytotoxin 8 *[Naja naja]* | (K)mYMVSDBTVPVBR(G) | 56.6 | 2 | 1568.8 | 2 | -0.9 | O(M1) |
|  |  |  |  |  |  |  | (Y)KTcPAGK(D) | 31.4 | 1 | 632.3 | 2 | 0.7 | Ca(C3) |
|  |  |  |  |  |  |  | (K)RGcXDVcPK(N) | 29.4 | 1 | 1103.5 | 2 | -0.4 | Ca(C3,C7) |
| BAU24665.1 | 158.3 | 71 | 11 | 18 | 8041 | cytotoxin 9 *[Naja naja]* | (T)XBcNBXVPXFYK(T) | 54.3 | 1 | 1521.9 | 2 | -0.5 | Ca(C3) |
|  |  |  |  |  |  |  | (K)MYMVATPK(V) | 53.4 | 2 | 939.5 | 2 | -0.6 |  |
|  |  |  |  |  |  |  | (K)RGcXDVcPBSSXXVBY(V) | 52.0 | 1 | 1574.8 | 2 | 1.1 | Ca(C3,C7) |
|  |  |  |  |  |  |  | (K)SSXXVBYVccNTDRcN(-) | 35.7 | 1 | 1987.9 | 3 | 0.0 | Ca(C9,C10,C15) |
| P25672.1 | 159.7 | 69 | 8 | 16 | 7889 | Long neurotoxin 4 *[Naja naja]* | (R)XRGERVDXGcAATcPTVK(T) | 43.0 | 2 | 2002.0 | 3 | -0.4 | Ca(C10,C14) |
|  |  |  |  |  |  |  | (K)TWcDGFcR(I) | 32.0 | 1 | 1100.4 | 2 | -0.4 | Ca(C4,C8) |
| P01391.1 | 187.1 | 79 | 9 | 17 | 7831 | Alpha-cobratoxin *[Naja kaouthia]* | (K)TGVDXBccSTDNcNPFPTRK(R) | 68.2 | 2 | 2369.0 | 2 | 4.1 | Ca(C7,C8,C13) |
| JAA74796.1 | 49.8 | 17 | 1 | 1 | 10221 | 3FTx-Fur-44 *[Furina ornata]* | (R)GERVEXGcAATcPTVK(P) | 34.1 | 1 | 1746.8 | 2 | 0.8 | Ca(C9,C13) |
|  |  |  |  |  |  |  | (R)VEXGcAATcPTVK(P) | 28.9 | 1 | 1404.7 | 2 | 0.4 | Ca(C5,C9) |
| P82464.1 | 103.1 | 42 | 2 | 2 | 7624 | Muscarinic toxin-like protein 3 *[Naja kaouthia]* | (R)TSETTEXcPDSWYFcYK(X) | 70.3 | 1 | 2185.9 | 2 | 6.9 | Ca(C9,C16) |
|  |  |  |  |  |  |  | (K)XSXADGNDVR(I) | 65.6 | 1 | 1058.5 | 2 | -0.7 |  |
| P29179.1 | 37.3 | 15 | 1 | 1 | 6943 | Weak neurotoxin 5 *[Naja naja]* | (-)XTcXXcPEK(Y) | 27.7 | 1 | 1132.6 | 2 | -0.2 | Ca(C3,C6) |
| P59276.1 | 144.4 | 62 | 7 | 43 | 6885 | Short neurotoxin 1 *[Naja oxiana]* | (-)XEcHNBBSSBPPTTK(T) | 66.8 | 24 | 1753.8 | 2 | -0.1 | Ca(C3) |
|  |  |  |  |  |  |  | (K)WWSDHRGTXXER(G) | 53.7 | 5 | 1554.8 | 2 | 0.2 |  |
|  |  |  |  |  |  |  | (K)VBPGVNXNccR(T) | 48.3 | 3 | 1315.6 | 3 | -0.1 | Ca(C9,C10) |
| P82463.1 | 171.1 | 57 | 6 | 38 | 7298 | Muscarinic toxin-like protein 2 *[Naja kaouthia]* | (K)SXFGVTTEDcPDGBNXcFBR(W) | 81.0 | 2 | 2343.1 | 2 | 1.6 | Ca(C10,C17) |
|  |  |  |  |  |  |  | (K)RWHMXVPGR(Y) | 49.1 | 1 | 1150.6 | 3 | 0.2 |  |
|  |  |  |  |  |  |  | (-)XTcVBEK(S) | 34.6 | 1 | 876.5 | 2 | 0.0 | Ca(C3) |
|  |  |  |  |  |  |  | (R)WHMXVPGRYK(K) | 34.3 | 1 | 1285.7 | 3 | -0.3 |  |
| CAA90964.1 | 136.6 | 27 | 5 | 8 | 9323 | cardiotoxin V *[Naja naja]* | (T)XBcHNTBXPFXYK(T) | 77.4 | 2 | 1660.9 | 2 | -0.1 | Ca(C3) |
|  |  |  |  |  |  |  | (K)FPXBFPVBR(G) | 52.3 | 2 | 1130.7 | 3 | -0.2 |  |
|  |  |  |  |  |  |  | (K)KFPXBFPVK(R) | 49.3 | 1 | 1102.7 | 3 | -0.4 |  |
| AAB18383.1 | 101.6 | 38 | 4 | 5 | 9065 | cardiotoxin 3a *[Naja atra]* | (K)NSXXVK(Y) | 35.3 | 1 | 672.4 | 2 | 0.3 |  |
|  |  |  |  |  |  |  | (K)NXcYBmFmVATPK(V) | 25.6 | 1 | 1633.8 | 2 | 0.7 | Ca(C3); O(M6,M8) |
| APB88857.1 | 58.0 | 21 | 2 | 4 | 9695 | neurotoxin-like protein *[Naja naja]* | (K)GXTRXPWVXRGcAATcPK(A) | 29.9 | 1 | 2055.1 | 4 | -1.7 | Ca(C12,C16) |
| P85092.1 | 56.3 | 31 | 2 | 2 | 7291 | Toxin AdTx1 *[Dendroaspis angusticeps]* | (K)SXFGXTTEDcPDGBNXcFBR(R) | 37.5 | 1 | 2357.1 | 2 | 1.6 | Ca(C10,C17) |
| P0CAR1.1 | 65.4 | 25 | 1 | 1 | 6533 | Short neurotoxin D1 *[Micrurus pyrrhocryptus]* | (-)MXcYNBBSSBPPTTK(T) | 65.4 | 1 | 1781.8 | 2 | -3.4 | Ca(C3) |
| **Ohanin like protein** | | | | | | | | | | | | | |
| P82885.1 | 192.4 | 61 | 8 | 15 | 12038 | Thaicobrin *[Naja kaouthia]* | (K)TVENVGVSBVAPDNPERFDGSPcVXGSPGFR(S) | 81.4 | 1 | 3286.6 | 3 | 7.9 | Ca(C23) |
|  |  |  |  |  |  |  | (K)YGTBREWAVGXAGK(S) | 59.4 | 2 | 1534.8 | 3 | -0.1 |  |
| **Cysteine-rich secretory protein** | | | | | | | | | | | | | |
| Q7T1K6.1 | 292.3 | 34 | 19 | 86 | 26846 | kaouthin-1 precursor *[Naja kaouthia]* | (R)VXEGXBcGESXYMSSNAR(T) | 111.1 | 2 | 2012.9 | 2 | 0.7 | Ca(C7) |
|  |  |  |  |  |  |  | (R)RVSPTASNmXBmEWYPEAASNAER(W) | 81.3 | 3 | 2769.3 | 3 | 1.7 | O(M9,M12) |
|  |  |  |  |  |  |  | (R)WANTcSXNHSPDNXR(V) | 78.0 | 5 | 1783.8 | 2 | 2.7 | Ca(C5) |
|  |  |  |  |  |  |  | (G)NVDFNSESTR(R) | 53.7 | 5 | 1167.5 | 2 | -0.5 |  |
|  |  |  |  |  |  |  | (K)KBBEXVDXHNSXR(R) | 43.1 | 2 | 1578.9 | 3 | -0.9 |  |
|  |  |  |  |  |  |  | (K)QBEXVDXHNSXRR(R) | 28.5 | 1 | 1606.9 | 2 | 1.2 |  |
| P0DL16.1 | 164.4 | 80 | 10 | 28 | 3599 | Cysteine-rich venom protein mossambin *[Naja mossambica]* | (K)KBNEXVDXHNSXRR(T) | 24.8 | 1 | 1720.9 | 4 | -1.2 |  |
| P84807.1 | 79.5 | 38 | 3 | 7 | 3430 | Cysteine-rich venom protein 25-A *[Naja haje haje]* | (-)DVDFNSESTRR(K) | 27.9 | 1 | 1324.6 | 2 | -3.9 |  |
| P84808.1 | 241.6 | 40 | 11 | 49 | 26216 | kaouthin-2 precursor *[Naja kaouthia]* | (K)YXYVcBYcPAGNXXGSXATPYK(S) | 84.2 | 1 | 2550.2 | 2 | 1.3 | Ca (C5,C7) |
|  |  |  |  |  |  |  | (R)NMXBMEWNSNAABNABR(W) | 77.1 | 2 | 2004.9 | 2 | 1.6 |  |
|  |  |  |  |  |  |  | (R)TVGBXGcGENXFmSSBPYAWSR(V) | 72.5 | 1 | 2503.2 | 3 | -0.3 | Ca (C7); O(M13) |
|  |  |  |  |  |  |  | (R)VXBSWYDENBK(F) | 67.8 | 16 | 1408.7 | 2 | -0.7 |  |
|  |  |  |  |  |  |  | (R)WADRcSFAHSPPHXR(T) | 51.4 | 4 | 1835.9 | 3 | -0.6 | Ca(C5) |
|  |  |  |  |  |  |  | (R)RSVRPTAR(N) | 32.0 | 2 | 941.6 | 3 | 0.8 |  |
| **Cobra venom factor** | | | | | | | | | | | | | |
| AFJ59923.1 | 268.7 | 15 | 21 | 36 | 183927 | OVF precursor protein *[Ophiophagus hannah]* | (R)TDTEEBXXVEAHGDNTPK(Q) | 92.0 | 3 | 1995.9 | 2 | 1.3 |  |
|  |  |  |  |  |  |  | (K)YFBPGmPYEXTVYVTNPDGSPAAK(V) | 81.9 | 2 | 2660.3 | 2 | -0.1 | O(M5) |
|  |  |  |  |  |  |  | (K)VSHSEDEcXBFK(I) | 73.0 | 2 | 1477.7 | 2 | 0.4 | Ca(C8) |
|  |  |  |  |  |  |  | (K)QXDXFVHDFPR(K) | 52.4 | 2 | 1385.7 | 2 | 0.2 |  |
|  |  |  |  |  |  |  | (K)VAVXXYXDKB(V) | 51.7 | 1 | 1032.6 | 2 | -1.4 |  |
|  |  |  |  |  |  |  | (E)GVDRYXSRYEVDNNmABK(V) | 39.4 | 1 | 2173.0 | 3 | 0.0 | O(M15) |
| I2C090.1 | 252.9 | 12 | 17 | 25 | 183927 | Ophiophagus venom factor *[Ophiophagus hannah]* | (K)VPVVSEAXHSEGTTXSDGTAK(L) | 87.8 | 2 | 2097.1 | 2 | 1.1 |  |
|  |  |  |  |  |  |  | (K)VGXVAVDBAVYVXNDBYK(I) | 77.3 | 3 | 1993.1 | 3 | 0.6 |  |
|  |  |  |  |  |  |  | (R)KXDDBVPDTEXETK(I) | 76.5 | 3 | 1629.8 | 2 | 0.7 |  |
|  |  |  |  |  |  |  | (K)XXBHFEVGFXBPGSVK(V) | 65.3 | 1 | 1798.0 | 3 | -0.5 |  |
|  |  |  |  |  |  |  | (K)XWDTXEK(S) | 30.7 | 1 | 903.5 | 2 | -0.6 |  |
| Q91132.1 | 301.4 | 34 | 60 | 86 | 184517 | Cobra venom factor *[Naja kaouthia]* | (R)YXYGEEVEGVAFVXFGVK(X) | 73.0 | 2 | 2018.0 | 2 | 0.3 |  |
|  |  |  |  |  |  |  | (R)XEEBDGNDXYVmDVXEVXK(Q) | 67.5 | 1 | 2237.1 | 2 | -4.2 | O(M12) |
|  |  |  |  |  |  |  | (R)KXDDRVPDTEXETK(I) | 61.2 | 1 | 1657.9 | 2 | 0.1 |  |
|  |  |  |  |  |  |  | (R)ASSSWXTAYVVK(V) | 57.6 | 1 | 1310.7 | 2 | 0.4 |  |
|  |  |  |  |  |  |  | (K)ATmTXXTFYNABXBEK(A) | 57.1 | 1 | 1886.9 | 2 | 1.1 | O(M3) |
|  |  |  |  |  |  |  | (K)VAVXXYXNK(V) | 50.7 | 1 | 1031.6 | 2 | -0.7 |  |
|  |  |  |  |  |  |  | (K)YFTYXXXNK(G) | 50.6 | 1 | 1173.6 | 2 | 0.0 |  |
|  |  |  |  |  |  |  | (K)FFYXDGNENFHVSXTAR(Y) | 49.9 | 3 | 2029.0 | 2 | 4.3 |  |
|  |  |  |  |  |  |  | (K)mVAGXSHEXXcGGVR(W) | 46.9 | 1 | 1613.8 | 2 | -0.8 | O(M1); Ca(C11) |
|  |  |  |  |  |  |  | (F)XBTDBGXYTPGSPVXYR(V) | 40.7 | 1 | 1907.0 | 3 | -0.8 |  |
|  |  |  |  |  |  |  | (H)GAXYTXXTPAVXR(T) | 39.8 | 1 | 1386.8 | 2 | 0.2 |  |
|  |  |  |  |  |  |  | (R)YRBBFPXBAXSSR(A) | 37.9 | 1 | 1592.9 | 3 | -0.4 |  |
|  |  |  |  |  |  |  | (F)DVRBYVXPSFEVR(L) | 29.0 | 1 | 1606.9 | 3 | 0.9 |  |
|  |  |  |  |  |  |  | (K)TMSFYXR(D) | 26.8 | 1 | 916.4 | 2 | 0.8 |  |
|  |  |  |  |  |  |  | (R)WXXXNR(Q) | 26.3 | 1 | 813.5 | 2 | 0.0 |  |
| AAX86641.1 | 172.4 | 7 | 11 | 14 | 184893 | venom factor *[Austrelaps superbus]* | (K)KVEGVAFVXFGVK(I) | 66.9 | 2 | 1391.8 | 2 | 0.2 |  |
|  |  |  |  |  |  |  | (W)AVPFVXVPXEBGXHDVEVBA(S) | 40.6 | 1 | 2159.2 | 2 | -0.2 |  |
| **Nerve growth factor** | | | | | | | | | | | | | |
| Q5YF89.1 | 207.4 | 39 | 8 | 13 | 27030 | nerve growth factor II *[Naja sputatrix]* | (R)GXDSSHWNSYcTETDTFXK(A) | 85.4 | 2 | 2260.0 | 2 | 2.2 | Ca()C11 |
|  |  |  |  |  |  |  | (R)FXRXDTAcVcVXTBK(T) | 65.5 | 2 | 1823.0 | 3 | -0.2 | Ca (C8,C10) |
|  |  |  |  |  |  |  | (R)EDHPVHNXGEHSVcDSVSAWVTK(T) | 40.5 | 1 | 2602.2 | 3 | 0.2 | Ca(C14) |
| A59218 | 227.1 | 38 | 8 | 20 | 27648 | nerve growth factor beta chain precursor *[Naja kaouthia]* | (A)TTATDXBGNTVTVmENVNXDNBVYK(Q) | 85.7 | 2 | 2783.4 | 3 | 1.1 | O(M14) |
|  |  |  |  |  |  |  | (K)AXTMEGNBASWR(F) | 78.1 | 1 | 1362.6 | 2 | -0.6 |  |
|  |  |  |  |  |  |  | (K)QYFFETK(C) | 43.7 | 4 | 961.5 | 2 | 0.2 |  |
|  |  |  |  |  |  |  | (R)XETAcVcVXTK(K) | 25.7 | 1 | 1292.6 | 2 | -0.7 | Ca(C5) |
| **Kunitz-type serine protease inhibitor** | | | | | | | | | | | | | |
| P20229.1 | 168.8 | 95 | 9 | 48 | 6371 | Kunitz-type serine protease inhibitor *[Naja naja]* | (K)AHBPAFYYNBDSHR(C) | 64.3 | 9 | 1732.8 | 2 | 0.8 |  |
|  |  |  |  |  |  |  | (K)FXYGGcGGNANRFR(T) | 47.6 | 1 | 1587.7 | 2 | 0.1 | Ca(C6) |
|  |  |  |  |  |  |  | (-)RPGFcEXPAABGXcK(A) | 33.3 | 1 | 1702.9 | 3 | -0.2 | Ca(C5,C14) |
|  |  |  |  |  |  |  | (R)FRTXDEcNRTcVG(-) | 32.6 | 1 | 1626.7 | 2 | -0.4 | Ca(C7,C11) |
| **Cystatin** | | | | | | | | | | | | | |
| ACR83850.1 | 104.0 | 18 | 2 | 2 | 15772 | cystatin precursor *[Naja kaouthia]* | (R)VVEABSBVVAGEK(Y) | 77.7 | 1 | 1342.7 | 2 | 0.2 |  |
|  |  |  |  |  |  |  | (A)AAAFAVBEYNAR(S) | 52.6 | 1 | 1309.6 | 2 | 0.2 |  |

**Supplementary table S3:** List of orthologous proteins of WI *N. naja* venom toxins identified by tandem mass spectroscopy analysis of SDS-PAGE bands of RP-HPLC peaks against Elapidae database. The modified residues viz., carbamidomethylation of cysteine and oxidation of methionine are represented in lower cases.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Protein Band** | **Protein Designated ID** | **Acession No.** | **Protein Description** | **Source organism** | **MW (kDa)** | **#Unique Peptides** | **Coverage (%)** | **Morpheus Score** | **Family** | **Peptides** | **Morpheus Score** | **m/z** | **z** | **Mass (Da)** | **Precursor Mass Error (Da)** |
| 1 | RP1 | sp|P01424 | Short neurotoxin 1 | *Naja melanoleuca* | 6.8 | 2 | 34.4 | 15.3 | 3FTx | -.MEcHNQQSSQPPTTK.T | 7.06 | 591.27 | 3 | 1770.77 | -0.99 |
|  |  |  |  |  |  |  |  |  |  | K.GVKINccTTDRcNN.- | 4.00 | 571.01 | 3 | 1710.01 | -0.71 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | RP2 | sp|P59275 | Cobrotoxin-b | *Naja kaouthia* | 6.9 | 2 | 27.9 | 15.3 | 3FTx | R.DRcNN.- | 3.03 | 340.21 | 2 | 678.40 | 1.14 |
|  |  |  |  |  |  |  |  |  |  | K.PGVNLNccRR.D | 2.00 | 311.96 | 4 | 1243.81 | -0.77 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | RP3 | sp|P20229 | Kunitz-type serine protease inhibitor | *Naja naja* | 6.3 | 6 | 70.2 | 69.8 | KSPI | K.FIYGGcGGNANR.F | 16.21 | 644.29 | 2 | 1286.57 | 2.00 |
|  |  |  |  |  |  |  |  |  |  | -.RPGFcELPAAK.G | 14.20 | 415.89 | 3 | 1244.64 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | R.PGFcELPAAK.G | 13.10 | 546.28 | 2 | 1090.55 | 2.02 |
|  |  |  |  |  |  |  |  |  |  | K.PAFYYNK.D | 10.21 | 451.73 | 2 | 901.44 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.AHKPAFYYNK.D | 10.07 | 413.55 | 3 | 1237.62 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.TIDEcNR.T | 6.06 | 454.20 | 2 | 906.38 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | -.RPGFcELPAAKGLcK.A | 3.01 | 851.53 | 2 | 1701.04 | -1.82 |
|  |  |  |  |  |  |  |  |  |  | R.FRTIDEcNRTcVG.- | 2.01 | 542.68 | 3 | 1625.02 | -1.71 |
|  |  |  |  |  |  |  |  |  |  | R.TIDEcNRTcVG.- | 2.00 | 441.85 | 3 | 1322.53 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | K.FIYGGcGGNANRFRTIDEcNR.T | 2.00 | 354.86 | 7 | 2476.96 | 0.85 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | RP4 | sp|P25669 | Long neurotoxin 2 | *Naja naja* | 7.8 | 3 | 46.5 | 32.3 | 3FTx | K.DcPNGHVcYTKTWcDGFcSSRGK.R | 5.01 | 930.83 | 3 | 2789.46 | -1.67 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.00 | 522.39 | 5 | 2606.93 | 0.91 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 3.02 | 870.33 | 3 | 2607.97 | 1.95 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.01 | 373.10 | 7 | 2604.67 | -1.35 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSRGK.R | 1.01 | 558.92 | 5 | 2789.58 | -1.56 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | RP5 | sp|P25668 | Long neurotoxin 1 | *Naja naja* | 7.9 | 1 | 18.3 | 17.1 | 3FTx | R.VDLGcAATcPTVR.T | 17.13 | 710.34 | 2.0 | 1418.66 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.RVDLGcAATcPTVR.T | 4.02 | 525.92 | 3.0 | 1574.75 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | R.GKRVDLGcAATcPTVR.T | 1.02 | 441.03 | 4.0 | 1760.09 | 0.21 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6 | RP6 | sp|P01391 | Alpha-cobratoxin | *Naja kaouthia* | 7.8 | 3 | 59.2 | 47.4 | 3FTx | R.VDLGcAATcPTVK.T | 18.09 | 696.33 | 2 | 1390.65 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.TGVDIQccSTDNcNPFPTR.K | 15.05 | 1121.46 | 2 | 2240.92 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.cFITPDITSK.D | 14.21 | 591.30 | 2 | 1180.58 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTK.T | 3.04 | 451.50 | 3 | 1351.48 | 1.93 |
|  |  |  |  |  |  |  |  |  |  | -.IRcFITPDITSK.D | 3.02 | 484.26 | 3 | 1449.75 | -0.02 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7 | RP7 | sp|O42257 | Long neurotoxin 7 | *Naja sputatrix* | 9.8 | 2 | 25.6 | 25.2 | 3FTx | R.VELGcAATcPTVK.P | 14.09 | 703.34 | 2 | 1404.67 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.PGVDIQccSTDNcNPFPTR.P | 11.09 | 745.98 | 3 | 2234.92 | -2.01 |
|  |  |  |  |  |  |  |  |  |  | K.PGVDIQccSTDNcNPFPTRP.- | 5.03 | 1168.96 | 2 | 2335.90 | 1.91 |
|  |  |  |  |  |  |  |  |  |  | K.TWcDGFcSSRGR.R | 3.01 | 496.55 | 3 | 1486.62 | -0.99 |
|  |  |  |  |  |  |  |  |  |  | M.KTLLLTLVLVTImcLDLGYTIR.C | 2.00 | 641.64 | 4 | 2562.53 | -1.94 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 | RP8 | sp|P25669 | Long neurotoxin 2 | *Naja naja* | 7.8 | 5 | 74.6 | 81.8 | 3FTx | K.DcPNGHVcYTKTWcDGFcSSRGK.R | 5.01 | 930.83 | 3 | 2789.46 | -1.67 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.00 | 522.39 | 5 | 2606.93 | 0.91 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 3.02 | 870.33 | 3 | 2607.97 | 1.95 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.01 | 373.10 | 7 | 2604.67 | -1.35 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSRGK.R | 1.01 | 558.92 | 5 | 2789.58 | -1.56 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9a | RP9a | sp|Q9PVK7 | Zinc metalloproteinase-disintegrin-like cobrin | *Naja kaouthia* | 67.7 | 9 | 21.0 | 111.8 | SVMP | K.TSAAVVQDYSK.S | 16.23 | 584.80 | 2 | 1167.58 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.ATLDLFGEWR.E | 14.16 | 604.31 | 2 | 1206.60 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.YIEFYmVVDNIMYR.H | 13.04 | 936.43 | 2 | 1870.84 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.ATLDLFGEWREK.K | 12.05 | 732.88 | 2 | 1463.74 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.NDNAQLLTGIDFNGTPVGLAYIGSIcNPK.T | 12.04 | 1021.51 | 3 | 3061.51 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.NSMIcNcSISPR.D | 11.05 | 719.81 | 2 | 1437.60 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | R.AAKDDcDLPELcTGQSAEcPTDVFQR.N | 11.04 | 994.75 | 3 | 2981.23 | -1.05 |
|  |  |  |  |  |  |  |  |  |  | K.VYEMINTMNMIYR.R | 10.06 | 839.40 | 2 | 1676.79 | 0.02 |
|  |  |  |  |  |  |  |  |  |  | R.TKPAYQFSScSVR.E | 8.09 | 510.92 | 3 | 1529.73 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.NQLVIK.R | 7.04 | 357.73 | 2 | 713.45 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.cPIMTNQcIALR.G | 7.01 | 738.86 | 2 | 1475.70 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.NQLVIKR.K | 6.05 | 436.27 | 2 | 870.53 | 0.99 |
|  |  |  |  |  |  |  |  |  |  | R.KVYEMINTMNmIYR.R | 6.05 | 608.29 | 3 | 1821.84 | 0.98 |
|  |  |  |  |  |  |  |  |  |  | K.TSAAVVQDYSKSTR.M | 6.03 | 756.88 | 2 | 1511.75 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.KRNDNAQLLTGIDFNGTPVGLAYIGSIcNPK.T | 5.03 | 837.68 | 4 | 3346.69 | 0.97 |
|  |  |  |  |  |  |  |  |  |  | R.MEYGRKIPcAAK.D | 5.00 | 711.52 | 2 | 1421.02 | -1.69 |
|  |  |  |  |  |  |  |  |  |  | -.MIQLSWSSIILESGNVNDYEVVYPQK.V | 4.01 | 1005.12 | 3 | 3012.34 | 0.84 |
|  |  |  |  |  |  |  |  |  |  | R.NGLPcQNNGYcYNGKcPIMTNQcIALR.G | 4.01 | 1072.51 | 3 | 3214.51 | -0.91 |
|  |  |  |  |  |  |  |  |  |  | K.cGDGMVcSNR.Q | 4.01 | 386.38 | 3 | 1156.11 | 1.68 |
|  |  |  |  |  |  |  |  |  |  | K.ATLDLFGEWREKK.L | 3.04 | 398.97 | 4 | 1591.86 | 0.02 |
|  |  |  |  |  |  |  |  |  |  | K.RNSMIcNcSISPRDPSYGmVEPGTK.C | 3.01 | 958.13 | 3 | 2871.38 | 0.10 |
|  |  |  |  |  |  |  |  |  |  | K.YIEFYMVVDNImYRHYKR.N | 3.01 | 615.20 | 4 | 2456.79 | 1.61 |
|  |  |  |  |  |  |  |  |  |  | K.RNSmIcNcSISPR.D | 3.00 | 537.76 | 3 | 1610.25 | 0.53 |
|  |  |  |  |  |  |  |  |  |  | K.IcGVTDTTWESDEPIKK.T | 3.00 | 496.00 | 4 | 1979.99 | 2.05 |
|  |  |  |  |  |  |  |  |  |  | K.cVmSTRRTK.P | 3.00 | 578.78 | 2 | 1155.55 | 1.98 |
|  |  |  |  |  |  |  |  |  |  | K.RKVYEmINTMNmIYR.R | 3.00 | 499.11 | 4 | 1992.42 | -0.54 |
|  |  |  |  |  |  |  |  |  |  | R.KIPcAAK.D | 2.03 | 394.22 | 2 | 786.43 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.RNQLVIKR.K | 2.02 | 512.82 | 2 | 1023.62 | -2.03 |
|  |  |  |  |  |  |  |  |  |  | K.KRNSMIcNcSISPR.D | 2.02 | 431.97 | 4 | 1723.85 | 2.04 |
|  |  |  |  |  |  |  |  |  |  | K.cGDGMVcSNRQcVDVK.T | 2.02 | 472.11 | 4 | 1884.40 | 0.62 |
|  |  |  |  |  |  |  |  |  |  | R.MEYGR.K | 2.00 | 328.14 | 2 | 654.27 | -0.01 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9b | RP9b | sp|P25668 | Long neurotoxin 1 | *Naja naja* | 7.9 | 1 | 18.3 | 13.1 | 3FTx | R.VDLGcAATcPTVR.T | 17.08 | 710.35 | 2 | 1418.68 | 0.02 |
|  |  |  |  |  |  |  |  |  |  | K.RVDLGcAATcPTVR.T | 14.11 | 525.93 | 3 | 1574.77 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.TGVDIQccSTDDcDPFPTR.K | 14.06 | 1121.46 | 2 | 2240.90 | -1.99 |
|  |  |  |  |  |  |  |  |  |  | K.TWcDGFcSIR.G | 12.07 | 651.28 | 2 | 1300.55 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | R.TGVDIQccSTDDcDPFPTRK.R | 5.02 | 790.97 | 3 | 2369.89 | -1.10 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10a | RP10a | sp|P82463 | Muscarinic toxin-like protein 2 | *Naja kaouthia* | 7.3 | 1 | 29.2 | 21.1 | 3FTx | K.SIFGVTTEDcPDGQNLcFK.R | 21.12 | 1094.47 | 2 | 2186.92 | -0.04 |
|  |  |  |  |  |  |  |  |  |  | R.WHMIVPGR.Y | 10.21 | 498.27 | 2 | 994.52 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.DVIEccSTDKcNL.- | 7.00 | 539.06 | 3 | 1614.15 | 1.49 |
|  |  |  |  |  |  |  |  |  |  | K.RWHmIVPGR.Y | 4.08 | 389.88 | 3 | 1166.62 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.SIFGVTTEDcPDGQNLcFKR.W | 4.01 | 781.38 | 3 | 2341.11 | -1.95 |
|  |  |  |  |  |  |  |  |  |  | R.WHmIVPGRYKK.T | 3.01 | 477.97 | 3 | 1430.88 | 1.12 |
|  |  |  |  |  |  |  |  |  |  | R.WHmIVPGRYK.K | 3.00 | 651.91 | 2 | 1301.81 | 0.14 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10b | RP10b | sp|P01390 | Long neurotoxin 1 | *Naja nivea* | 7.9 | 1 | 26.8 | 14.2 | 3FTx | K.PGVNIKccSRDNcNPFPTR.K | 14.17 | 764.65 | 3 | 2290.94 | -0.10 |
|  |  |  |  |  |  |  |  |  |  | K.RVDLGcAATcPKVK.P | 10.05 | 524.93 | 3 | 1571.77 | -2.04 |
|  |  |  |  |  |  |  |  |  |  | K.MWcDNFcGMRGK.R | 8.00 | 391.02 | 4 | 1560.06 | -0.55 |
|  |  |  |  |  |  |  |  |  |  | K.VKPGVNIK.C | 5.00 | 428.35 | 2 | 854.69 | 1.15 |
|  |  |  |  |  |  |  |  |  |  | K.ccSRDNcNPFPTR.K | 3.04 | 843.34 | 2 | 1684.67 | 2.00 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11a | RP11a | sp|P85092 | Toxin AdTx1 | *Dendroaspis angusticeps* | 7.3 | 2 | 30.8 | 33.1 | 3FTx | K.SIFGITTEDcPDGQNLcFK.R | 20.07 | 1101.49 | 2 | 2200.96 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.SIFGITTEDcPDGQNLcFKR.R | 13.06 | 786.71 | 3 | 2357.10 | 0.02 |
|  |  |  |  |  |  |  |  |  |  | R.HYVVPKIYDSTR.G | 5.01 | 738.37 | 2 | 1474.73 | -2.04 |
|  |  |  |  |  |  |  |  |  |  | R.HYVVPK.I | 1.03 | 372.22 | 2 | 742.42 | 1.00 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11b | RP11b | sp|P01391 | Alpha-cobratoxin | *Naja kaouthia* | 7.8 | 2 | 45.1 | 40.2 | 3FTx | K.TGVDIQccSTDNcNPFPTR.K | 23.11 | 747.97 | 3 | 2240.90 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | R.VDLGcAATcPTVK.T | 17.12 | 696.34 | 2 | 1390.66 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.cFITPDITSK.D | 13.25 | 591.29 | 2 | 1180.58 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | -.IRcFITPDITSK.D | 12.12 | 484.26 | 3 | 1449.77 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.TGVDIQccSTDNcNPFPTRKR.P | 5.01 | 843.04 | 3 | 2526.11 | 0.98 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTK.T | 4.05 | 451.19 | 3 | 1350.56 | 1.01 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12a | RP12a | sp|P25671 | Long neurotoxin 3 | *Naja naja* | 7.8 | 2 | 32.4 | 22.2 | 3FTx | K.TGVDIQccSTDDcDPFPTR.K | 10.03 | 1121.47 | 2 | 2240.92 | -1.98 |
|  |  |  |  |  |  |  |  |  |  | K.TGVDIQccSTDDcDPFPTRK.R | 7.01 | 791.37 | 3 | 2371.08 | 0.09 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12b | RP12b | sp|P25669 | Long neurotoxin 2 | *Naja naja* | 7.8 | 3 | 33.8 | 50.3 | 3FTx | K.DcPNGHVcYTKTWcDGFcSSRGK.R | 5.01 | 930.83 | 3 | 2789.46 | -1.67 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.00 | 522.39 | 5 | 2606.93 | 0.91 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 3.02 | 870.33 | 3 | 2607.97 | 1.95 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.01 | 373.10 | 7 | 2604.67 | -1.35 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSRGK.R | 1.01 | 558.92 | 5 | 2789.58 | -1.56 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13a | RP13a | sp|P01389 | Long neurotoxin 1 | *Naja anchietae* | 7.9 | 2 | 36.6 | 31.2 | 3FTx | K.PGVDIKccSTDNcNPFPTRER.S | 2.02 | 631.37 | 4 | 2521.46 | -0.65 |
|  |  |  |  |  |  |  |  |  |  | K.TWcDNFcGmR.G | 2.01 | 682.53 | 2 | 1363.04 | 1.54 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13b | RP13b | sp|P01391 | Alpha-cobratoxin | *Naja kaouthia* | 7.8 | 3 | 59.2 | 61.6 | 3FTx | K.TGVDIQccSTDNcNPFPTR.K | 23.18 | 1121.47 | 2 | 2240.93 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | R.VDLGcAATcPTVK.T | 22.11 | 695.33 | 2 | 1388.64 | -2.02 |
|  |  |  |  |  |  |  |  |  |  | R.cFITPDITSK.D | 16.32 | 591.30 | 2 | 1180.58 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | -.IRcFITPDITSK.D | 14.14 | 483.59 | 3 | 1447.76 | -2.00 |
|  |  |  |  |  |  |  |  |  |  | K.TGVDIQccSTDNcNPFPTRK.R | 13.05 | 790.68 | 3 | 2369.02 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.cFITPDITSKDcPNGHVcYTK.T | 13.03 | 629.29 | 4 | 2513.12 | 1.01 |
|  |  |  |  |  |  |  |  |  |  | K.TWcDAFcSIR.G | 12.05 | 658.28 | 2 | 1314.55 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTK.T | 10.05 | 676.28 | 2 | 1350.54 | 0.99 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 14 | RP14 | sp|P25668 | Long neurotoxin 1 | *Naja naja* | 7.9 | 4 | 60.6 | 67.6 | 3FTx | R.VDLGcAATcPTVR.T | 20.11 | 710.34 | 2 | 1418.67 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.RVDLGcAATcPTVR.T | 16.19 | 525.93 | 3 | 1574.77 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.TGVDIQccSTDDcDPFPTR.K | 16.12 | 1121.97 | 2 | 2241.92 | -0.98 |
|  |  |  |  |  |  |  |  |  |  | K.TWcDGFcSIR.G | 11.16 | 651.27 | 2 | 1300.53 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.TGVDIQccSTDDcDPFPTRKR.P | 7.01 | 843.03 | 3 | 2526.06 | -1.03 |
|  |  |  |  |  |  |  |  |  |  | R.GKRVDLGcAATcPTVR.T | 4.01 | 880.87 | 2 | 1759.72 | -0.16 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15a | RP15a | sp|Q5YF89 | Venom nerve growth factor 2 | *Naja sputatrix* | 27.0 | 4 | 44.8 | 71.3 | NGF | K.RQFQSPRVLFSTQPPLLSR.D | 2.01 | 564.99 | 4 | 2255.93 | -0.32 |
|  |  |  |  |  |  |  |  |  |  | R.QFQSPR.V | 1.03 | 382.22 | 2 | 762.42 | 1.04 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15b | RP15b | sp|P01140 | Venom nerve growth factor | *Naja naja* | 13.0 | 4 | 49.1 | 72.4 | NGF | R.IDTAcVcVITKKTGN.- | 3.03 | 561.01 | 3 | 1680.00 | 1.16 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16a | RP16a | sp|P15445 | Acidic phospholipase A2 2 | *Naja naja* | 13.3 | 4 | 47.1 | 67.6 | PLA2 | K.cTVPSRSWWDFADYGcYcGR.G | 2.02 | 636.99 | 4 | 2543.92 | 1.89 |
|  |  |  |  |  |  |  |  |  |  | K.cTVPSRSWWDFADYGcYcGRGGSGTPVDDLDR.C | 10.01 | 743.57 | 5 | 3712.83 | 1.28 |
|  |  |  |  |  |  |  |  |  |  | K.ISGcWPYFKTYSYEcSQGTLTcKGDNNAcAASVcDcDR.L | 7.00 | 1500.63 | 3 | 4498.87 | -1.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16b | RP16b | sp|P82464 | Muscarinic toxin-like protein 3 | *Naja kaouthia* | 7.6 | 2 | 56.9 | 46.3 | 3FTx | R.TSETTEIcPDSWYFcYK.I | 24.17 | 1093.95 | 2 | 2185.89 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.GcTFTcPELRPTGIYVYccR.R | 22.14 | 836.71 | 3 | 2507.09 | -2.01 |
|  |  |  |  |  |  |  |  |  |  | K.ISLADGNDVR.I | 15.34 | 530.27 | 2 | 1058.53 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.PTGIYVYccR.R | 15.09 | 644.79 | 2 | 1287.57 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | -.TIcYNHLTR.T | 14.08 | 589.29 | 2 | 1176.57 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.GcTFTcPELR.P | 12.11 | 620.78 | 2 | 1239.54 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.ISLADGNDVRIKR.G | 6.01 | 729.39 | 2 | 1456.77 | 0.96 |
|  |  |  |  |  |  |  |  |  |  | R.DKcNQ.- | 2.00 | 332.66 | 2 | 663.30 | 0.03 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17a | RP17a | sp|Q92086 | Acidic phospholipase A2 C | *Naja sputatrix* | 16.1 | 4 | 51.3 | 84.7 | PLA2 | K.NmVQcTVPNR.S | 2.01 | 617.41 | 2 | 1232.81 | -0.75 |
|  |  |  |  |  |  |  |  |  |  | K.NMVQcTVPNRSWWDFADYGcYcGR.G | 3.02 | 1014.15 | 3 | 3039.44 | -1.81 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 7.01 | 1063.44 | 2 | 2124.87 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.NMVQcTVPNR.S | 2.03 | 407.20 | 3 | 1218.58 | 1.02 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 6.01 | 1064.44 | 2 | 2126.86 | 1.98 |
|  |  |  |  |  |  |  |  |  |  | R.LAAIcFAGAPYNDNNYNIDLKARcQ.- | 2.04 | 719.17 | 4 | 2872.63 | 1.29 |
|  |  |  |  |  |  |  |  |  |  | R.PmPLNLYQFKNmVQcTVPNRSWWDFADYGcYcGR.G | 2.00 | 616.06 | 7 | 4305.38 | 0.50 |
|  |  |  |  |  |  |  |  |  |  | R.GGSGTPVDDLDRccQVHDNcYGEAEK.I | 5.01 | 735.30 | 4 | 2937.17 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 2.01 | 709.16 | 3 | 2124.46 | -0.41 |
|  |  |  |  |  |  |  |  |  |  | K.NmVQcTVPNR.S | 4.02 | 618.29 | 2 | 1234.56 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | K.NmVQcTVPNR.S | 3.02 | 618.26 | 2 | 1234.51 | 0.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17b | RP17b | sp|P82464 | Muscarinic toxin-like protein 3 | *Naja kaouthia* | 7.6 | 3 | 72.3 | 57.4 | 3FTx | R.TSETTEIcPDSWYFcYK.I | 26.15 | 1093.95 | 2 | 2185.89 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.ISLADGNDVR.I | 16.16 | 530.77 | 2 | 1059.52 | 0.99 |
|  |  |  |  |  |  |  |  |  |  | R.GcTFTcPELRPTGIYVYccR.R | 15.07 | 837.37 | 3 | 2509.08 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | -.TIcYNHLTR.T | 12.07 | 589.29 | 2 | 1176.57 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.GcTFTcPELR.P | 9.04 | 620.78 | 2 | 1239.54 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | R.PTGIYVYccRRDK.C | 4.01 | 563.08 | 3 | 1686.20 | -0.59 |
|  |  |  |  |  |  |  |  |  |  | R.PTGIYVYccR.R | 3.01 | 645.47 | 2 | 1288.93 | 1.35 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 18a | RP18a | sp|Q5YF89 | Venom nerve growth factor 2 | *Naja sputatrix* | 27.0 | 4 | 49.1 | 56.3 | NGF | R.TAANIIVDPKLFQKR.Q | 4.01 | 571.69 | 3 | 1712.06 | -0.94 |
|  |  |  |  |  |  |  |  |  |  | R.VLFSTQPPLLSR.D | 3.05 | 453.25 | 3 | 1356.73 | -0.04 |
|  |  |  |  |  |  |  |  |  |  | R.HPAPQKAEDQELR.T | 3.01 | 760.46 | 2 | 1518.90 | 1.14 |
|  |  |  |  |  |  |  |  |  |  | R.QFQSPR.V | 2.01 | 382.20 | 2 | 762.39 | 1.01 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 18b | RP18b | sp|Q92086 | Acidic phospholipase A2 C | *Naja sputatrix* | 16.1 | 4 | 51.3 | 88.7 | PLA2 | K.NmVQcTVPNR.S | 2.01 | 617.41 | 2 | 1232.81 | -0.75 |
|  |  |  |  |  |  |  |  |  |  | K.NMVQcTVPNRSWWDFADYGcYcGR.G | 3.02 | 1014.15 | 3 | 3039.44 | -1.81 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 7.01 | 1063.44 | 2 | 2124.87 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.NMVQcTVPNR.S | 2.03 | 407.20 | 3 | 1218.58 | 1.02 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 6.01 | 1064.44 | 2 | 2126.86 | 1.98 |
|  |  |  |  |  |  |  |  |  |  | R.LAAIcFAGAPYNDNNYNIDLKARcQ.- | 2.04 | 719.17 | 4 | 2872.63 | 1.29 |
|  |  |  |  |  |  |  |  |  |  | R.PmPLNLYQFKNmVQcTVPNRSWWDFADYGcYcGR.G | 2.00 | 616.06 | 7 | 4305.38 | 0.50 |
|  |  |  |  |  |  |  |  |  |  | R.GGSGTPVDDLDRccQVHDNcYGEAEK.I | 5.01 | 735.30 | 4 | 2937.17 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 2.01 | 709.16 | 3 | 2124.46 | -0.41 |
|  |  |  |  |  |  |  |  |  |  | K.NmVQcTVPNR.S | 4.02 | 618.29 | 2 | 1234.56 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | K.NmVQcTVPNR.S | 3.02 | 618.26 | 2 | 1234.51 | 0.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 18c | RP18c | sp|P86538 | Cytotoxin 2a | *Naja naja* | 6.7 | 3 | 45.0 | 53.4 | 3FTx | K.MFMVSDLTIPVKR.G | 11.08 | 512.95 | 3 | 1535.82 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.MFMVSDLTIPVKRGcIDVcPK.N | 4.01 | 617.14 | 4 | 2464.52 | -0.71 |
|  |  |  |  |  |  |  |  |  |  | K.MFMVSDLTIPVK.R | 3.02 | 460.53 | 3 | 1378.56 | -1.16 |
|  |  |  |  |  |  |  |  |  |  | K.LVPIASKTcPPGK.N | 2.01 | 683.43 | 2 | 1364.85 | -1.91 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 19a | RP19a | sp|Q5YF89 | Venom nerve growth factor 2 | *Naja sputatrix* | 27.0 | 3 | 39.7 | 49.2 | NGF | R.VLFSTQPPLLSR.D | 3.07 | 453.25 | 3 | 1356.73 | -0.05 |
|  |  |  |  |  |  |  |  |  |  | K.VYKQYFFETK.C | 3.01 | 677.45 | 2 | 1352.89 | 1.21 |
|  |  |  |  |  |  |  |  |  |  | -.MSMLcYTLITAFLIGIWAAPK.S | 2.03 | 343.95 | 7 | 2400.60 | 1.35 |
|  |  |  |  |  |  |  |  |  |  | K.AEDQELRTAANIIVDPKLFQK.R | 2.01 | 801.10 | 3 | 2400.27 | 1.99 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 19b | RP19b | sp|P15445 | Acidic phospholipase A2 2 | *Naja naja* | 13.3 | 6 | 71.4 | 126.0 | PLA2 | K.cTVPSRSWWDFADYGcYcGR.G | 2.02 | 636.99 | 4 | 2543.92 | 1.89 |
|  |  |  |  |  |  |  |  |  |  | K.cTVPSRSWWDFADYGcYcGRGGSGTPVDDLDR.C | 10.01 | 743.57 | 5 | 3712.83 | 1.28 |
|  |  |  |  |  |  |  |  |  |  | K.ISGcWPYFKTYSYEcSQGTLTcKGDNNAcAASVcDcDR.L | 7.00 | 1500.63 | 3 | 4498.87 | -1.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 19c | RP19c | sp|Q9W717 | Neurotoxin-like protein NTL2 | *Naja atra* | 9.7 | 1 | 29.1 | 21.0 | 3FTx | R.LcLSDYSIFSETIEIcPDGHNFcFK.K | 21.04 | 1018.11 | 3 | 3051.32 | -0.03 |
|  |  |  |  |  |  |  |  |  |  | K.GITRLPWVIR.G | 10.23 | 404.25 | 3 | 1209.74 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.VYVDccAR.D | 8.14 | 522.73 | 2 | 1043.44 | 2.00 |
|  |  |  |  |  |  |  |  |  |  | R.LPWVIR.G | 7.03 | 392.25 | 2 | 782.48 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.AEARVYVDccARDK.C | 5.01 | 571.68 | 3 | 1712.03 | 0.25 |
|  |  |  |  |  |  |  |  |  |  | R.LPWVIRGcAATcPKAEAR.V | 3.01 | 685.85 | 3 | 2054.54 | -0.51 |
|  |  |  |  |  |  |  |  |  |  | R.DKcNR.- | 2.02 | 347.68 | 2 | 693.35 | 2.05 |
|  |  |  |  |  |  |  |  |  |  | K.FPKGITR.L | 2.00 | 410.43 | 2 | 818.84 | 1.36 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20a | RP20a | sp|Q6T179 | Acidic phospholipase A2 4 | *Naja sagittifera* | 14.2 | 5 | 56.3 | 99.0 | PLA2 | K.TYTYEcSQGTLTcK.G | 18.05 | 856.37 | 2 | 1710.72 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.WKTYTYEcSQGTLTcKGR.N | 8.00 | 747.05 | 3 | 2238.12 | 0.10 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20b | RP20b | sp|P86538 | Cytotoxin 2a | *Naja naja* | 6.7 | 4 | 70.0 | 62.2 | 3FTx | K.MFmVSDLTIPVK.R | 16.06 | 699.86 | 2 | 1397.71 | 2.00 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYKMFMVSDLTIPVKR.G | 14.03 | 554.54 | 4 | 2214.14 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.MFMVSDLTIPVKR.G | 12.14 | 512.94 | 3 | 1535.81 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYKMFMVSDLTIPVK.R | 9.02 | 515.51 | 4 | 2058.02 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.TcPPGKNLcYKMFMVSDLTIPVK.R | 9.01 | 675.57 | 4 | 2698.24 | -0.10 |
|  |  |  |  |  |  |  |  |  |  | -.LQcNKLVPIASK.T | 5.02 | 685.42 | 2 | 1368.83 | -0.94 |
|  |  |  |  |  |  |  |  |  |  | K.LVPIASKTcPPGK.N | 4.01 | 683.96 | 2 | 1365.90 | -0.87 |
|  |  |  |  |  |  |  |  |  |  | K.MFMVSDLTIPVKRGcIDVcPK.N | 2.01 | 823.22 | 3 | 2466.63 | 1.39 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21a | RP21a | sp|P00598 | Acidic phospholipase A2 1 | *Naja atra* | 16.0 | 1 | 40.4109589 | 13.2 | PLA2 | R.SWWDFADYGcYcGR.G | 23.16 | 920.85 | 2 | 1839.69 | -2.01 |
|  |  |  |  |  |  |  |  |  |  | K.TYSYEcSQGTLTcK.G | 21.11 | 849.35 | 2 | 1696.69 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.ISGcWPYFK.T | 13.25 | 579.27 | 2 | 1156.53 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.LAAIcFAGAPYNNNNYNIDLK.A | 5.01 | 1177.57 | 2 | 2353.12 | -2.02 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21b | RP21b | sp|Q92086 | Acidic phospholipase A2 C | *Naja sputatrix* | 16.1 | 5 | 52.9 | 109.8 | PLA2 | K.NmVQcTVPNR.S | 2.01 | 617.41 | 2 | 1232.81 | -0.75 |
|  |  |  |  |  |  |  |  |  |  | K.NMVQcTVPNRSWWDFADYGcYcGR.G | 3.02 | 1014.15 | 3 | 3039.44 | -1.81 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 7.01 | 1063.44 | 2 | 2124.87 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.NMVQcTVPNR.S | 2.03 | 407.20 | 3 | 1218.58 | 1.02 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 6.01 | 1064.44 | 2 | 2126.86 | 1.98 |
|  |  |  |  |  |  |  |  |  |  | R.LAAIcFAGAPYNDNNYNIDLKARcQ.- | 2.04 | 719.17 | 4 | 2872.63 | 1.29 |
|  |  |  |  |  |  |  |  |  |  | R.PmPLNLYQFKNmVQcTVPNRSWWDFADYGcYcGR.G | 2.00 | 616.06 | 7 | 4305.38 | 0.50 |
|  |  |  |  |  |  |  |  |  |  | R.GGSGTPVDDLDRccQVHDNcYGEAEK.I | 5.01 | 735.30 | 4 | 2937.17 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 2.01 | 709.16 | 3 | 2124.46 | -0.41 |
|  |  |  |  |  |  |  |  |  |  | K.NmVQcTVPNR.S | 4.02 | 618.29 | 2 | 1234.56 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | K.NmVQcTVPNR.S | 3.02 | 618.26 | 2 | 1234.51 | 0.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21c | RP21c | sp|P01446 | Cytotoxin 3 | *Naja kaouthia* | 6.7 | 2 | 45.0 | 34.1 | 3FTx | K.NSLLVKYVccNTDR.C | 17.04 | 581.29 | 3 | 1740.83 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.mFMVSNKTVPVKR.G | 17.03 | 776.92 | 2 | 1551.83 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.LIPLAYKTcPAGK.N | 15.08 | 716.40 | 2 | 1430.79 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.MFMVSNKTVPVK.R | 15.08 | 460.92 | 3 | 1379.73 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYKMFMVSNK.T | 15.06 | 512.25 | 3 | 1533.72 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.LIPLAYKTcPAGKNLcYK.M | 15.02 | 528.28 | 4 | 2109.11 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.cNKLIPLAYK.T | 14.04 | 610.34 | 2 | 1218.67 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.GcIDAcPKNSLLVKYVccNTDR.C | 12.00 | 881.42 | 3 | 2641.25 | -0.96 |
|  |  |  |  |  |  |  |  |  |  | K.MFMVSNK.T | 11.32 | 428.70 | 2 | 855.39 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | -.LKcNKLIPLAYK.T | 11.04 | 487.63 | 3 | 1459.86 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.LIPLAYK.T | 10.46 | 409.26 | 2 | 816.51 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.TcPAGKNLcYK.M | 10.05 | 656.31 | 2 | 1310.61 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.NSLLVK.Y | 9.15 | 337.21 | 2 | 672.41 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYK.M | 6.13 | 349.17 | 2 | 696.32 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.TVPVKR.G | 5.29 | 350.23 | 2 | 698.44 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.GcIDAcPK.N | 5.01 | 460.21 | 2 | 918.41 | -0.97 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYKMFMVSNKTVPVK.R | 3.01 | 687.39 | 3 | 2059.16 | 1.11 |
|  |  |  |  |  |  |  |  |  |  | K.TcPAGK.N | 2.02 | 317.15 | 2 | 632.29 | -0.01 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22a | RP22a | sp|E3P6P4 | Cystatin | *Naja kaouthia* | 15.8 | 2 | 17.7 | 31.1 | CYS | R.VVEAQSQVVAGEK.Y | 16.04 | 672.36 | 2 | 1342.70 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.AAAFAVQEYNAR.S | 15.10 | 655.83 | 2 | 1309.64 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.YYLMMELVK.T | 10.07 | 595.30 | 2 | 1188.59 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.PWLDKTELTK.M | 4.01 | 614.89 | 2 | 1227.76 | -1.91 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22b | RP22b | sp|P15445 | Acidic phospholipase A2 2 | *Naja naja* | 13.3 | 5 | 63.9 | 103.7 | PLA2 | K.cTVPSRSWWDFADYGcYcGR.G | 2.02 | 636.99 | 4 | 2543.92 | 1.89 |
|  |  |  |  |  |  |  |  |  |  | K.cTVPSRSWWDFADYGcYcGRGGSGTPVDDLDR.C | 10.01 | 743.57 | 5 | 3712.83 | 1.28 |
|  |  |  |  |  |  |  |  |  |  | K.ISGcWPYFKTYSYEcSQGTLTcKGDNNAcAASVcDcDR.L | 7.00 | 1500.63 | 3 | 4498.87 | -1.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22c | RP22c | sp|P60301 | Cytotoxin 3 | *Naja atra* | 9.0 | 3 | 49.4 | 52.2 | 3FTx | K.SSLLVK.Y | 6.12 | 323.71 | 2 | 645.40 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.TcPAGKNLcYKMFMVATPK.V | 6.03 | 739.51 | 3 | 2215.50 | -0.56 |
|  |  |  |  |  |  |  |  |  |  | K.MFMVATPK.V | 6.02 | 463.24 | 2 | 924.47 | 1.01 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYKMFmVATPK.V | 6.01 | 539.62 | 3 | 1615.83 | -1.94 |
|  |  |  |  |  |  |  |  |  |  | K.SSLLVKYVccNTDR.C | 5.01 | 572.30 | 3 | 1713.86 | 0.05 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTTVVVTIVcLDLEYTLKcNK.L | 3.01 | 936.62 | 3 | 2806.85 | -1.69 |
|  |  |  |  |  |  |  |  |  |  | K.MFmVATPKVPVK.R | 3.01 | 683.29 | 2 | 1364.56 | 1.82 |
|  |  |  |  |  |  |  |  |  |  | K.SSLLVKYVccNTDRcN.- | 2.01 | 663.26 | 3 | 1986.77 | -1.12 |
|  |  |  |  |  |  |  |  |  |  | K.VPVKR.G | 2.00 | 300.20 | 2 | 598.38 | 0.99 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 23a | RP23a | sp|E3P6P4 | Cystatin | *Naja kaouthia* | 15.8 | 1 | 8.5 | 16.1 | CYS | K.AAAFAVQEYNAR.S | 16.13 | 655.82 | 2 | 1309.63 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.YYLmMELVK.T | 5.02 | 603.30 | 2 | 1204.59 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.AAAFAVQEYNARSANAHYYK.E | 5.01 | 1122.51 | 2 | 2243.00 | -1.07 |
|  |  |  |  |  |  |  |  |  |  | R.VVEAQSQVVAGEKYYLmmELVK.T | 3.01 | 848.79 | 3 | 2543.34 | -1.94 |
|  |  |  |  |  |  |  |  |  |  | K.YYLMmELVKTK.C | 2.02 | 718.02 | 2 | 1434.02 | 0.29 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 23b | RP23b | sp|P82885 | Thaicobrin | *Naja kaouthia* | 12.0 | 4 | 48.1 | 82.4 | OLP | K.ADVTFDSNTAFESLVVSPDK.K | 22.09 | 1072.01 | 2 | 2142.00 | 0.98 |
|  |  |  |  |  |  |  |  |  |  | K.TVENVGVSQVAPDNPER.F | 22.07 | 905.95 | 2 | 1809.88 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.FDGSPcVLGSPGFR.S | 21.10 | 748.35 | 2 | 1494.69 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.ADVTFDSNTAFESLVVSPDKK.T | 17.17 | 757.37 | 3 | 2269.09 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.HFFEVK.Y | 10.11 | 403.71 | 2 | 805.41 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | -.SPPGNWQK.A | 5.06 | 457.73 | 2 | 913.45 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | R.LVPEER.I | 4.20 | 371.71 | 2 | 741.40 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.GLWWLG.- | 2.01 | 365.24 | 2 | 728.46 | -1.92 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 23c | RP23c | sp|Q9PST3 | Cytotoxin 2b | *Naja sputatrix* | 9.0 | 8 | 79.2 | 126.9 | 3FTx | K.TLLLTLVVVTTVcLDLGYTLK.C | 4.01 | 584.61 | 4 | 2334.41 | 0.06 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLK.C | 3.02 | 584.23 | 4 | 2332.88 | -1.46 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLK.C | 2.03 | 584.19 | 4 | 2332.74 | -1.61 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLKcNK.L | 2.00 | 456.92 | 6 | 2735.47 | -1.05 |
|  |  |  |  |  |  |  |  |  |  | -.MKTLLLTLVVVTTVcLDLGYTLKcNK.L | 2.00 | 1498.13 | 2 | 2994.25 | -1.40 |
|  |  |  |  |  |  |  |  |  |  | M.KTLLLTLVVVTTVcLDLGYTLKcNK.L | 4.03 | 717.13 | 4 | 2864.47 | -0.14 |
|  |  |  |  |  |  |  |  |  |  | -.MKTLLLTLVVVTTVcLDLGYTLKcNK.L | 4.01 | 999.35 | 3 | 2995.02 | -0.64 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLK.C | 2.04 | 584.12 | 4 | 2332.46 | -1.89 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLKcNK.L | 3.01 | 685.20 | 4 | 2736.77 | 0.25 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLK.C | 4.01 | 584.19 | 4 | 2332.75 | -1.60 |
|  |  |  |  |  |  |  |  |  |  | M.KTLLLTLVVVTTVcLDLGYTLK.C | 1.01 | 493.52 | 5 | 2462.56 | 0.11 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLK.C | 3.03 | 584.47 | 4 | 2333.85 | -0.49 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLKcNK.L | 3.00 | 685.20 | 4 | 2736.78 | 0.27 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLKcNKLVPLFYK.T | 3.01 | 515.15 | 7 | 3598.99 | 1.95 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLKcNK.L | 3.01 | 685.19 | 4 | 2736.75 | 0.23 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLKcNK.L | 4.01 | 913.10 | 3 | 2736.28 | -0.24 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLKcNKLVPLFYK.T | 4.04 | 600.53 | 6 | 3597.13 | 0.10 |
|  |  |  |  |  |  |  |  |  |  | -.mKTLLLTLVVVTTVcLDLGYTLK.C | 4.01 | 870.25 | 3 | 2607.74 | -1.74 |
|  |  |  |  |  |  |  |  |  |  | -.MKTLLLTLVVVTTVcLDLGYTLK.C | 4.01 | 865.42 | 3 | 2593.22 | -0.26 |
|  |  |  |  |  |  |  |  |  |  | K.TLLLTLVVVTTVcLDLGYTLK.C | 3.03 | 584.08 | 4 | 2332.31 | -2.04 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24a | RP24a | sp|P84808 | Cysteine-rich venom protein kaouthin-2 | *Naja kaouthia* | 26.2 | 2 | 16.0 | 36.1 | CRISP | R.NMLQmEWNSNAAQNAK.R | 3.01 | 934.36 | 2 | 1866.71 | 1.89 |
|  |  |  |  |  |  |  |  |  |  | R.NMLQMEWNSNAAQNAKRWADR.C | 3.00 | 634.18 | 4 | 2532.68 | -0.49 |
|  |  |  |  |  |  |  |  |  |  | R.SVRPTAR.N | 2.01 | 393.26 | 2 | 784.50 | -0.95 |
|  |  |  |  |  |  |  |  |  |  | R.cSFAHSPPHLRTVGK.I | 2.01 | 565.72 | 3 | 1694.15 | 1.30 |
|  |  |  |  |  |  |  |  |  |  | K.QIVDK.H | 2.00 | 302.69 | 2 | 603.36 | 2.02 |
|  |  |  |  |  |  |  |  |  |  | K.cAAScFcR.T | 2.00 | 516.31 | 2 | 1030.60 | 0.22 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24b | RP24b | sp|P82885 | Thaicobrin | *Naja kaouthia* | 12.0 | 4 | 48.1 | 91.6 | OLP | K.TVENVGVSQVAPDNPER.F | 24.11 | 905.94 | 2 | 1809.87 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.FDGSPcVLGSPGFR.S | 23.30 | 747.34 | 2 | 1492.67 | -2.03 |
|  |  |  |  |  |  |  |  |  |  | K.ADVTFDSNTAFESLVVSPDK.K | 23.12 | 1071.51 | 2 | 2141.00 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.ADVTFDSNTAFESLVVSPDKK.T | 21.04 | 1135.55 | 2 | 2269.09 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.TVENVGVSQVAPDNPERFDGSPcVLGSPGFR.S | 14.02 | 1096.53 | 3 | 3286.56 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.EWAVGLAGK.S | 13.28 | 465.75 | 2 | 929.49 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.HFFEVK.Y | 9.09 | 403.71 | 2 | 805.41 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | -.SPPGNWQK.A | 7.08 | 457.22 | 2 | 912.43 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.LVPEER.I | 6.22 | 371.71 | 2 | 741.41 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.IWQKGLWWLG.- | 6.03 | 643.85 | 2 | 1285.69 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.YGTQREWAVGLAGK.S | 6.02 | 512.60 | 3 | 1534.78 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.SGKHFFEVK.Y | 5.05 | 360.19 | 3 | 1077.56 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.FDGSPcVLGSPGFRSGK.H | 4.01 | 590.38 | 3 | 1768.13 | 1.29 |
|  |  |  |  |  |  |  |  |  |  | R.KGYLR.L | 2.07 | 318.69 | 2 | 635.37 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.YGTQREWAVGLAGKSVK.R | 2.01 | 616.81 | 3 | 1847.40 | -1.58 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24c | RP24c | sp|P86541 | Cytotoxin 10 | *Naja naja* | 6.8 | 7 | 90.0 | 118.5 | 3FTx | K.DLcYKmYMVATPK.V | 10.02 | 545.60 | 3 | 1633.77 | -0.98 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25a | RP25a | sp|Q7ZZN8 | Cysteine-rich venom protein natrin-2 | *Naja atra* | 26.3 | 4 | 37.8 | 65.3 | CRISP | K.YLYVcQYcPTGNIIGSIATPYK.S | 12.06 | 860.76 | 3 | 2579.26 | -0.98 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25b | RP25b | sp|P15445 | Acidic phospholipase A2 2 | *Naja naja* | 13.3 | 5 | 58.8 | 80.8 | PLA2 | K.cTVPSRSWWDFADYGcYcGR.G | 2.02 | 636.99 | 4 | 2543.92 | 1.89 |
|  |  |  |  |  |  |  |  |  |  | K.cTVPSRSWWDFADYGcYcGRGGSGTPVDDLDR.C | 10.01 | 743.57 | 5 | 3712.83 | 1.28 |
|  |  |  |  |  |  |  |  |  |  | K.ISGcWPYFKTYSYEcSQGTLTcKGDNNAcAASVcDcDR.L | 7.00 | 1500.63 | 3 | 4498.87 | -1.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25c | RP25c | sp|Q9PST3 | Cytotoxin 2b | *Naja sputatrix* | 9.0 | 7 | 73.6 | 85.1 | 3FTx | K.TLLLTLVVVTTVcLDLGYTLKcNK.L | 3.01 | 685.19 | 4 | 2736.75 | 0.23 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26a | RP26a | sp|A8QL58 | L-amino-acid oxidase (Fragment) | *Naja atra* | 51.4 | 3 | 8.7 | 35.3 | LAAO | K.TSNPKHVVVVGAGMAGLSAAYVLAGAGHK.V | 11.01 | 920.80 | 3 | 2759.37 | -2.10 |
|  |  |  |  |  |  |  |  |  |  | R.EIQALcYPSIKK.W | 9.00 | 726.35 | 2 | 1450.69 | 1.92 |
|  |  |  |  |  |  |  |  |  |  | R.GAVDmIGDLLNEDSSYHLSFMESLK.S | 7.01 | 929.78 | 3 | 2786.32 | 0.04 |
|  |  |  |  |  |  |  |  |  |  | K.YPVKPSEEGKSASQLYQEPLR.K | 5.01 | 802.41 | 3 | 2404.20 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | K.RTNcSYILNK.Y | 4.03 | 633.85 | 2 | 1265.69 | -1.94 |
|  |  |  |  |  |  |  |  |  |  | R.SPLEEcFQQNDYEEILEIARNGLK.K | 4.02 | 724.85 | 4 | 2895.36 | 0.98 |
|  |  |  |  |  |  |  |  |  |  | K.VTLLEASERVGGRVITYHNDR.E | 4.02 | 795.21 | 3 | 2382.61 | -1.65 |
|  |  |  |  |  |  |  |  |  |  | R.SATKIFLTcSK.K | 4.02 | 628.38 | 2 | 1254.75 | 0.09 |
|  |  |  |  |  |  |  |  |  |  | R.RSPLEEcFQQNDYEEILEIARNGLK.K | 4.01 | 1018.20 | 3 | 3051.58 | 1.10 |
|  |  |  |  |  |  |  |  |  |  | R.VIKIQYDAEK.V | 4.01 | 603.81 | 2 | 1205.60 | -0.06 |
|  |  |  |  |  |  |  |  |  |  | K.IQYDAEKVR.V | 3.02 | 562.30 | 2 | 1122.58 | 1.99 |
|  |  |  |  |  |  |  |  |  |  | K.KTSNPKHVVVVGAGmAGLSAAYVLAGAGHK.V | 3.01 | 969.49 | 3 | 2905.44 | -0.12 |
|  |  |  |  |  |  |  |  |  |  | K.SDALFSYEK.R | 3.01 | 353.27 | 3 | 1056.79 | -1.70 |
|  |  |  |  |  |  |  |  |  |  | K.VTLLEASER.V | 3.01 | 509.31 | 2 | 1016.60 | 0.05 |
|  |  |  |  |  |  |  |  |  |  | R.SIHYR.S | 2.03 | 338.19 | 2 | 674.37 | 0.02 |
|  |  |  |  |  |  |  |  |  |  | K.PSEEGKSASQLYQEPLRK.V | 2.02 | 512.14 | 4 | 2044.51 | -1.53 |
|  |  |  |  |  |  |  |  |  |  | R.TNcSYILNK.Y | 2.02 | 556.27 | 2 | 1110.52 | -1.01 |
|  |  |  |  |  |  |  |  |  |  | K.SASQLYQEPLR.K | 2.02 | 645.96 | 2 | 1289.90 | -0.76 |
|  |  |  |  |  |  |  |  |  |  | K.AHALRSIHYR.S | 2.02 | 612.40 | 2 | 1222.79 | 0.12 |
|  |  |  |  |  |  |  |  |  |  | K.IFLTcSK.K | 2.01 | 433.77 | 2 | 865.53 | -1.93 |
|  |  |  |  |  |  |  |  |  |  | R.VGGRVITYHNDREGWYVNmGPmR.L | 2.01 | 685.18 | 4 | 2736.70 | -1.58 |
|  |  |  |  |  |  |  |  |  |  | R.SIHYRSATK.I | 2.01 | 531.85 | 2 | 1061.69 | 0.12 |
|  |  |  |  |  |  |  |  |  |  | R.RIYFEPPLPPKK.A | 2.01 | 741.97 | 2 | 1481.93 | -1.92 |
|  |  |  |  |  |  |  |  |  |  | R.IYFEPPLPPK.K | 2.00 | 301.18 | 4 | 1200.68 | 1.02 |
|  |  |  |  |  |  |  |  |  |  | R.RIYFEPPLPPK.K | 2.00 | 678.45 | 2 | 1354.89 | -0.87 |
|  |  |  |  |  |  |  |  |  |  | K.YTmGSITSF.- | 1.02 | 341.90 | 3 | 1022.67 | 1.22 |
|  |  |  |  |  |  |  |  |  |  | R.AARRIYFEPPLPPK.K | 1.01 | 552.97 | 3 | 1655.88 | 1.94 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26b | RP26b | sp|P84808 | Cysteine-rich venom protein kaouthin-2 | *Naja kaouthia* | 26.2 | 4 | 28.2 | 76.5 | CRISP | R.NmLQMEWNSNAAQNAK.R | 5.01 | 934.11 | 2 | 1866.21 | 1.40 |
|  |  |  |  |  |  |  |  |  |  | R.VIQSWYDENK.K | 5.00 | 641.53 | 2 | 1281.05 | 0.44 |
|  |  |  |  |  |  |  |  |  |  | R.PTARNMLQMEWNSNAAQNAK.R | 4.01 | 759.31 | 3 | 2274.92 | 0.86 |
|  |  |  |  |  |  |  |  |  |  | K.SKcAAScFcR.T | 4.01 | 623.76 | 2 | 1245.50 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.HNALRRSVR.P | 2.00 | 370.41 | 3 | 1108.21 | 0.57 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26c | RP26c | sp|P84808 | Cysteine-rich venom protein kaouthin-2 | *Naja kaouthia* | 26.2 | 9 | 60.5 | 154.1 | CRISP | K.YLYVcQYcPAGNIIGSIATPYK.S | 15.03 | 1276.12 | 2 | 2550.22 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.NMLQMEWNSNAAQNAK.R | 7.01 | 926.45 | 2 | 1850.89 | 2.07 |
|  |  |  |  |  |  |  |  |  |  | R.VIQSWYDENKK.F | 5.02 | 470.57 | 3 | 1408.69 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.cAAScFcR.T | 3.03 | 515.69 | 2 | 1029.36 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | R.RSVRPTAR.N | 3.00 | 471.82 | 2 | 941.63 | 0.08 |
|  |  |  |  |  |  |  |  |  |  | R.cSFAHSPPHLR.T | 2.04 | 436.95 | 3 | 1307.83 | 0.21 |
|  |  |  |  |  |  |  |  |  |  | R.TVGKIGcGENLFMSSQPYAWSRVIQSWYDENK.K | 2.01 | 938.68 | 4 | 3750.71 | 0.95 |
|  |  |  |  |  |  |  |  |  |  | R.PTARNMLQmEWNSNAAQNAKR.W | 2.00 | 612.19 | 4 | 2444.73 | -1.43 |
|  |  |  |  |  |  |  |  |  |  | K.QNAcQTEWmK.S | 1.01 | 329.00 | 4 | 1311.99 | 1.45 |
|  |  |  |  |  |  |  |  |  |  | K.HNALRRSVR.P | 1.00 | 370.40 | 3 | 1108.18 | 0.55 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26d | RP26d | sp|P84808 | Cysteine-rich venom protein kaouthin-2 | *Naja kaouthia* | 26.2 | 4 | 37.8 | 81.4 | CRISP | K.IGcGENLFmSSQPYAWSR.V | 25.14 | 1058.96 | 2 | 2115.90 | -2.03 |
|  |  |  |  |  |  |  |  |  |  | K.YLYVcQYcPAGNIIGSIATPYK.S | 24.16 | 1276.10 | 2 | 2550.19 | -0.04 |
|  |  |  |  |  |  |  |  |  |  | R.NMLQMEWNSNAAQNAK.R | 22.14 | 925.42 | 2 | 1848.82 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.FVYGVGANPPGSVIGHYTQIVWYNSHLLGcGAAK.C | 22.06 | 908.94 | 4 | 3631.75 | -0.05 |
|  |  |  |  |  |  |  |  |  |  | R.VIQSWYDENKK.F | 15.07 | 705.35 | 2 | 1408.69 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.VIQSWYDENK.K | 14.10 | 641.30 | 2 | 1280.59 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.QNAcQTEWMK.S | 14.06 | 647.28 | 2 | 1292.54 | -2.00 |
|  |  |  |  |  |  |  |  |  |  | R.cSFAHSPPHLR.T | 12.07 | 436.88 | 3 | 1307.61 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.HHNVFSNcQSLAK.Q | 9.04 | 513.92 | 3 | 1538.75 | -1.98 |
|  |  |  |  |  |  |  |  |  |  | K.cAAScFcR.T | 7.05 | 516.19 | 2 | 1030.37 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.WADRcSFAHSPPHLR.T | 6.01 | 613.57 | 3 | 1837.70 | 1.84 |
|  |  |  |  |  |  |  |  |  |  | R.SVRPTAR.N | 4.04 | 393.73 | 2 | 785.44 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.QIVDKHNALR.R | 4.02 | 597.33 | 2 | 1192.64 | -0.03 |
|  |  |  |  |  |  |  |  |  |  | R.ENQKQIVDK.H | 3.02 | 552.23 | 2 | 1102.44 | 1.86 |
|  |  |  |  |  |  |  |  |  |  | K.cAAScFcRTEII.- | 1.04 | 497.23 | 3 | 1488.67 | 2.03 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26e | RP26e | sp|Q92086 | Acidic phospholipase A2 C | *Naja sputatrix* | 16.1 | 4 | 51.3 | 77.6 | PLA2 | K.NmVQcTVPNR.S | 2.01 | 617.41 | 2 | 1232.81 | -0.75 |
|  |  |  |  |  |  |  |  |  |  | K.NMVQcTVPNRSWWDFADYGcYcGR.G | 3.02 | 1014.15 | 3 | 3039.44 | -1.81 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 7.01 | 1063.44 | 2 | 2124.87 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.NMVQcTVPNR.S | 2.03 | 407.20 | 3 | 1218.58 | 1.02 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 6.01 | 1064.44 | 2 | 2126.86 | 1.98 |
|  |  |  |  |  |  |  |  |  |  | R.LAAIcFAGAPYNDNNYNIDLKARcQ.- | 2.04 | 719.17 | 4 | 2872.63 | 1.29 |
|  |  |  |  |  |  |  |  |  |  | R.PmPLNLYQFKNmVQcTVPNRSWWDFADYGcYcGR.G | 2.00 | 616.06 | 7 | 4305.38 | 0.50 |
|  |  |  |  |  |  |  |  |  |  | R.GGSGTPVDDLDRccQVHDNcYGEAEK.I | 5.01 | 735.30 | 4 | 2937.17 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | R.ccQVHDNcYGEAEKISR.C | 2.01 | 709.16 | 3 | 2124.46 | -0.41 |
|  |  |  |  |  |  |  |  |  |  | K.NmVQcTVPNR.S | 4.02 | 618.29 | 2 | 1234.56 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | K.NmVQcTVPNR.S | 3.02 | 618.26 | 2 | 1234.51 | 0.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26f | RP26f | sp|P80245 | Cytotoxin 6 | *Naja atra* | 8.9 | 8 | 51.9 | 114.1 | 3FTx | K.mFMVAAPKVPVK.R | 15.05 | 667.37 | 2 | 1332.72 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYKmFMVAAPK.V | 14.06 | 530.26 | 3 | 1587.76 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.mFmVAAPK.V | 13.14 | 463.72 | 2 | 925.43 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.mFMVAAPKVPVKR.G | 13.13 | 497.62 | 3 | 1489.83 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | K.TcAAGKNLcYKmFMVAAPK.V | 6.01 | 726.01 | 3 | 2175.00 | -1.03 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 27a | RP27a | sp|D5LMJ3 | Zinc metalloproteinase-disintegrin-like atrase-A | *Naja atra* | 68.2 | 3 | 9.7 | 49.4 | SVMP | K.cPTMENQcITLLGPNYTVGPAGcFK.N | 19.07 | 944.10 | 3 | 2829.27 | 1.99 |
|  |  |  |  |  |  |  |  |  |  | R.VYEMVNYLNTK.Y | 17.26 | 687.34 | 2 | 1372.67 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.DDcDLPEFcTGQSAEcPTDSLQR.N | 13.06 | 901.70 | 3 | 2702.08 | 2.01 |
|  |  |  |  |  |  |  |  |  |  | K.TGcIVPVSPR.D | 12.27 | 543.29 | 2 | 1084.57 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.ERPQcILNKPSR.K | 12.07 | 499.93 | 3 | 1496.78 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.TRVYEMVNYLNTK.Y | 11.08 | 544.28 | 3 | 1629.81 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.VYEMVNYLNTKYR.R | 11.07 | 564.96 | 3 | 1691.85 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.YIEFYLVVDNK.M | 11.05 | 701.87 | 2 | 1401.72 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.cGTLYcTEIK.K | 10.06 | 622.78 | 2 | 1243.55 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.TGcIVPVSPRDPDSR.M | 9.06 | 827.89 | 2 | 1653.76 | -1.04 |
|  |  |  |  |  |  |  |  |  |  | K.IPcAAKDEK.C | 9.05 | 516.26 | 2 | 1030.51 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.SFAEWR.A | 8.29 | 398.19 | 2 | 794.37 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.KTGcIVPVSPR.D | 8.24 | 405.23 | 3 | 1212.65 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.cGTLYcTEIKK.T | 8.06 | 458.22 | 3 | 1371.64 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.EHQEYLLR.E | 7.10 | 363.19 | 3 | 1086.55 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.ERPQcILNK.P | 7.07 | 386.54 | 3 | 1156.59 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.TILmASTmAHELGHNMGIHHDKANcR.C | 7.01 | 993.77 | 3 | 2978.28 | 1.93 |
|  |  |  |  |  |  |  |  |  |  | R.DPDSRMVEPGTKcEDK.K | 7.01 | 931.62 | 2 | 1861.22 | -1.59 |
|  |  |  |  |  |  |  |  |  |  | R.YLQVK.K | 6.08 | 325.70 | 2 | 649.38 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.mVEPGTK.C | 6.03 | 389.21 | 2 | 776.40 | 0.03 |
|  |  |  |  |  |  |  |  |  |  | K.LPPHKR.N | 5.08 | 374.22 | 2 | 746.43 | -0.03 |
|  |  |  |  |  |  |  |  |  |  | K.DENVEKEDETPK.I | 5.01 | 715.85 | 2 | 1429.69 | -1.95 |
|  |  |  |  |  |  |  |  |  |  | K.IPcAAKDEKcGTLYcTEIK.K | 4.09 | 752.68 | 3 | 2255.01 | -1.05 |
|  |  |  |  |  |  |  |  |  |  | K.KYIEFYLVVDNK.M | 4.04 | 510.94 | 3 | 1529.81 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.YLQVKK.Y | 4.04 | 390.18 | 2 | 778.35 | 0.87 |
|  |  |  |  |  |  |  |  |  |  | R.KGDDVSHcRK.E | 4.02 | 600.29 | 2 | 1198.56 | -2.00 |
|  |  |  |  |  |  |  |  |  |  | R.KGDDVSHcR.K | 4.02 | 537.26 | 2 | 1072.51 | 0.04 |
|  |  |  |  |  |  |  |  |  |  | R.VYEMVNYLNTKYRR.L | 4.01 | 925.42 | 2 | 1848.82 | 0.89 |
|  |  |  |  |  |  |  |  |  |  | K.MYKNHTSNQELRTR.V | 4.00 | 889.46 | 2 | 1776.90 | 0.03 |
|  |  |  |  |  |  |  |  |  |  | K.SQcVKV.- | 3.07 | 360.68 | 2 | 719.34 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | R.PQcILNKPSR.K | 3.04 | 404.87 | 3 | 1211.59 | -0.05 |
|  |  |  |  |  |  |  |  |  |  | K.GDDVSHcR.K | 3.02 | 473.21 | 2 | 944.41 | 0.03 |
|  |  |  |  |  |  |  |  |  |  | K.TSQLTNTPEQDR.Y | 3.01 | 694.42 | 2 | 1386.82 | -1.83 |
|  |  |  |  |  |  |  |  |  |  | R.TILMASTMAHELGHNMGIHHDK.A | 3.01 | 612.18 | 4 | 2444.68 | 1.52 |
|  |  |  |  |  |  |  |  |  |  | K.IPcAAK.D | 2.06 | 330.19 | 2 | 658.36 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.YEDTmR.Y | 2.02 | 416.38 | 2 | 830.75 | 1.42 |
|  |  |  |  |  |  |  |  |  |  | K.GDDVSHcRK.E | 2.02 | 358.50 | 3 | 1072.48 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.GGVQNPQPETKYEDTMR.Y | 2.01 | 650.69 | 3 | 1949.06 | 0.16 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 27b | RP27b | sp|A8QL53 | Snake venom serine protease NaSP (Fragment) | *Naja atra* | 31.1 | 1 | 5.0 | 17.0 | SVSP | -.mVLIR.V | 1.00 | 323.19 | 2 | 644.37 | -2.01 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 27c | RP27c | sp|P84808 | Cysteine-rich venom protein kaouthin-2 | *Naja kaouthia* | 26.2 | 4 | 37.8 | 93.5 | CRISP | K.IGcGENLFmSSQPYAWSR.V | 25.14 | 1058.96 | 2 | 2115.90 | -2.03 |
|  |  |  |  |  |  |  |  |  |  | K.YLYVcQYcPAGNIIGSIATPYK.S | 24.16 | 1276.10 | 2 | 2550.19 | -0.04 |
|  |  |  |  |  |  |  |  |  |  | R.NMLQMEWNSNAAQNAK.R | 22.14 | 925.42 | 2 | 1848.82 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.FVYGVGANPPGSVIGHYTQIVWYNSHLLGcGAAK.C | 22.06 | 908.94 | 4 | 3631.75 | -0.05 |
|  |  |  |  |  |  |  |  |  |  | R.VIQSWYDENKK.F | 15.07 | 705.35 | 2 | 1408.69 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.VIQSWYDENK.K | 14.10 | 641.30 | 2 | 1280.59 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.QNAcQTEWMK.S | 14.06 | 647.28 | 2 | 1292.54 | -2.00 |
|  |  |  |  |  |  |  |  |  |  | R.cSFAHSPPHLR.T | 12.07 | 436.88 | 3 | 1307.61 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.HHNVFSNcQSLAK.Q | 9.04 | 513.92 | 3 | 1538.75 | -1.98 |
|  |  |  |  |  |  |  |  |  |  | K.cAAScFcR.T | 7.05 | 516.19 | 2 | 1030.37 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.WADRcSFAHSPPHLR.T | 6.01 | 613.57 | 3 | 1837.70 | 1.84 |
|  |  |  |  |  |  |  |  |  |  | R.SVRPTAR.N | 4.04 | 393.73 | 2 | 785.44 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.QIVDKHNALR.R | 4.02 | 597.33 | 2 | 1192.64 | -0.03 |
|  |  |  |  |  |  |  |  |  |  | R.ENQKQIVDK.H | 3.02 | 552.23 | 2 | 1102.44 | 1.86 |
|  |  |  |  |  |  |  |  |  |  | K.cAAScFcRTEII.- | 1.04 | 497.23 | 3 | 1488.67 | 2.03 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 27d | RP27d | sp|P84808 | Cysteine-rich venom protein kaouthin-2 | *Naja kaouthia* | 26.2 | 4 | 37.8 | 87.5 | CRISP | R.cSFAHSPPHLR.T | 4.01 | 436.22 | 3 | 1305.65 | -1.97 |
|  |  |  |  |  |  |  |  |  |  | R.NMLQmEWNSNAAQNAK.R | 4.01 | 621.98 | 3 | 1862.91 | -1.91 |
|  |  |  |  |  |  |  |  |  |  | K.QNAcQTEWmKSK.C | 4.01 | 763.50 | 2 | 1524.98 | -0.68 |
|  |  |  |  |  |  |  |  |  |  | R.VIQSWYDENKK.F | 3.01 | 470.01 | 3 | 1407.01 | -1.69 |
|  |  |  |  |  |  |  |  |  |  | K.QNAcQTEWmK.S | 3.01 | 656.44 | 2 | 1310.86 | 0.32 |
|  |  |  |  |  |  |  |  |  |  | R.TVGKIGcGENLFmSSQPYAWSR.V | 3.01 | 834.77 | 3 | 2501.27 | -1.89 |
|  |  |  |  |  |  |  |  |  |  | K.SKcAAScFcRTEII.- | 3.00 | 425.96 | 4 | 1699.80 | -1.96 |
|  |  |  |  |  |  |  |  |  |  | K.IGcGENLFmSSQPYAWSR.V | 3.00 | 707.17 | 3 | 2118.48 | 0.55 |
|  |  |  |  |  |  |  |  |  |  | K.KFVYGVGANPPGSVIGHYTQIVWYNSHLLGcGAAK.C | 2.01 | 537.89 | 7 | 3758.16 | -1.74 |
|  |  |  |  |  |  |  |  |  |  | R.VIQSWYDENK.K | 2.00 | 320.97 | 4 | 1279.85 | -0.75 |
|  |  |  |  |  |  |  |  |  |  | R.PTARNMLQmEWNSNAAQNAKR.W | 2.00 | 612.17 | 4 | 2444.66 | -1.49 |
|  |  |  |  |  |  |  |  |  |  | R.cSFAHSPPHLRTVGK.I | 1.01 | 564.97 | 3 | 1691.88 | -0.98 |
|  |  |  |  |  |  |  |  |  |  | K.SKcAAScFcR.T | 1.00 | 312.86 | 4 | 1247.41 | 1.90 |
|  |  |  |  |  |  |  |  |  |  | -.MIAFIVLLSLAAVLQQSSGTVDFASESSNKRENQK.Q | 1.00 | 1892.21 | 2 | 3782.41 | 1.44 |
|  |  |  |  |  |  |  |  |  |  | R.SVRPTAR.N | 1.00 | 393.50 | 2 | 784.98 | -0.47 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 27e | RP27e | sp|P15445 | Acidic phospholipase A2 2 | *Naja naja* | 13.3 | 5 | 58.8 | 92.6 | PLA2 | K.cTVPSRSWWDFADYGcYcGR.G | 2.02 | 636.99 | 4 | 2543.92 | 1.89 |
|  |  |  |  |  |  |  |  |  |  | K.cTVPSRSWWDFADYGcYcGRGGSGTPVDDLDR.C | 10.01 | 743.57 | 5 | 3712.83 | 1.28 |
|  |  |  |  |  |  |  |  |  |  | K.ISGcWPYFKTYSYEcSQGTLTcKGDNNAcAASVcDcDR.L | 7.00 | 1500.63 | 3 | 4498.87 | -1.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 27f | RP27f | sp|P60301 | Cytotoxin 3 | *Naja atra* | 9.0 | 3 | 43.2 | 40.3 | 3FTx | K.SSLLVKYVccNTDRcN.- | 18.12 | 663.63 | 3 | 1987.88 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.SSLLVKYVccNTDR.C | 17.15 | 572.28 | 3 | 1713.81 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.GcIDVcPKSSLLVK.Y | 12.02 | 788.40 | 2 | 1574.79 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.mFMVATPKVPVK.R | 10.03 | 681.37 | 2 | 1360.72 | -2.02 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYKMFmVATPK.V | 9.03 | 808.88 | 2 | 1615.75 | -2.02 |
|  |  |  |  |  |  |  |  |  |  | K.SSLLVK.Y | 8.29 | 323.71 | 2 | 645.40 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.mFMVATPKVPVKR.G | 6.04 | 506.61 | 3 | 1516.81 | -2.03 |
|  |  |  |  |  |  |  |  |  |  | K.VPVKRGcIDVcPK.S | 5.03 | 509.93 | 3 | 1526.78 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.TcPAGKNLcYKMFmVATPK.V | 5.02 | 1116.87 | 2 | 2231.72 | -0.34 |
|  |  |  |  |  |  |  |  |  |  | K.MFmVATPK.V | 4.04 | 471.72 | 2 | 941.43 | 1.97 |
|  |  |  |  |  |  |  |  |  |  | -.MKTLLLTTVVVTIVcLDLEYTLK.C | 4.00 | 667.10 | 4 | 2664.37 | -1.13 |
|  |  |  |  |  |  |  |  |  |  | K.VPVKR.G | 2.01 | 300.20 | 2 | 598.39 | 0.99 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 28a | RP28a | sp|D6PXE8 | Zinc metalloproteinase-disintegrin-like atrase-B | *Naja atra* | 66.2 | 9 | 13.7 | 163.1 | SVMP | R.ISLVASTmTHELGHNLGIHHDK.A | 16.02 | 486.44 | 5 | 2427.17 | 1.95 |
|  |  |  |  |  |  |  |  |  |  | R.GDDGSFcGmEDGTK.I | 4.02 | 498.31 | 3 | 1491.91 | 1.38 |
|  |  |  |  |  |  |  |  |  |  | R.RISLVASTMTHELGHNLGIHHDK.A | 3.03 | 642.09 | 4 | 2564.34 | -0.98 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 28b | RP28b | sp|P82942 | Hemorrhagic metalloproteinase-disintegrin-like kaouthiagin | *Naja kaouthia* | 44.5 | 11 | 38.9027431 | 187.5960756 | SVMP | K.HDcDLPELcTGQSAEcPTDSLQR.N | 22.11 | 897.04 | 3 | 2688.10 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | K.cPTLTNQcIALLGPHFTVSPK.G | 20.06 | 785.40 | 3 | 2353.19 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.NDNAQLLTGINLNGTAVGIAYPGSLcTQR.S | 19.07 | 1011.49 | 3 | 3031.44 | 0.92 |
|  |  |  |  |  |  |  |  |  |  | K.IHIALIGLEIWSNEDK.F | 18.17 | 617.67 | 3 | 1849.99 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.IHIALIGLEIWSNEDKFEVK.P | 16.11 | 589.58 | 4 | 2354.27 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | R.YYNYDKPAIK.I | 16.05 | 637.82 | 2 | 1273.63 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.DYQEYLLR.D | 13.25 | 550.27 | 2 | 1098.53 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.MSLVASTmTHELGHNLGIHHDEAScIcIPGPcImLK.K | 11.02 | 813.19 | 5 | 4060.92 | 0.04 |
|  |  |  |  |  |  |  |  |  |  | R.QTVLLPR.K | 9.21 | 413.76 | 2 | 825.51 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.TAPAFQFSScSIRDYQEYLLR.D | 8.02 | 851.40 | 3 | 2551.19 | -0.03 |
|  |  |  |  |  |  |  |  |  |  | K.PAASVTLKSFR.E | 4.01 | 589.81 | 2 | 1177.62 | 1.95 |
|  |  |  |  |  |  |  |  |  |  | R.YYNYDK.P | 2.02 | 432.74 | 2 | 863.47 | -0.90 |
|  |  |  |  |  |  |  |  |  |  | K.FNGAGAEcR.A | 2.01 | 490.98 | 2 | 979.95 | -0.47 |
|  |  |  |  |  |  |  |  |  |  | K.NTmScLIPPNPDGImAEPGTK.C | 2.00 | 569.93 | 4 | 2275.68 | 1.65 |
|  |  |  |  |  |  |  |  |  |  | K.FRPLK.I | 1.00 | 330.71 | 2 | 659.40 | -0.01 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 28c | RP28c | sp|A8QL53 | Snake venom serine protease NaSP (Fragment) | *Naja atra* | 31.1 | 2 | 10.6 | 28.1 | SVSP | R.FPcAQLLEPGVYTK.V | 15.04 | 811.91 | 2 | 1621.81 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.LGVHNVHVHYEDEQIR.V | 13.02 | 487.00 | 4 | 1943.96 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.LGVHNVHVHYEDEQIRVPK.E | 9.05 | 455.04 | 5 | 2270.18 | 2.00 |
|  |  |  |  |  |  |  |  |  |  | -.mVLIRVLASLLILQLSYSK.S | 6.02 | 726.68 | 3 | 2177.02 | 1.71 |
|  |  |  |  |  |  |  |  |  |  | R.LNSSVNNSKHIEPLSLPSR.P | 6.01 | 697.64 | 3 | 2089.89 | -1.22 |
|  |  |  |  |  |  |  |  |  |  | K.NcTQWSQDIMLIRLNSSVNNSK.H | 4.01 | 869.41 | 3 | 2605.20 | -2.06 |
|  |  |  |  |  |  |  |  |  |  | K.ESAYDDEIQQSSWGNSTVNTTLTETVVIQLImGGSEcYKSK.H | 4.01 | 656.14 | 7 | 4585.95 | 1.83 |
|  |  |  |  |  |  |  |  |  |  | R.PPSMGSDcTVmGWGTITSPK.V | 4.00 | 1063.58 | 2 | 2125.15 | 1.22 |
|  |  |  |  |  |  |  |  |  |  | R.KNILcAGVLEGGK.D | 3.00 | 679.46 | 2 | 1356.90 | -0.84 |
|  |  |  |  |  |  |  |  |  |  | -.mVLIR.V | 2.01 | 324.21 | 2 | 646.40 | 0.02 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 28d | RP28d | sp|Q7T1K6 | Cysteine-rich venom protein natrin-1 | *Naja atra* | 26.9 | 10 | 38.9 | 112.3 | CRISP | R.VLEGIQcGESIYmSSNAR.T | 16.09 | 1014.48 | 2 | 2026.94 | -1.98 |
|  |  |  |  |  |  |  |  |  |  | K.MEWYPEAASNAER.W | 15.27 | 777.84 | 2 | 1553.67 | 1.01 |
|  |  |  |  |  |  |  |  |  |  | K.EIVDLHNSLR.R | 14.07 | 598.33 | 2 | 1194.64 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.TWTEIIHLWHDEYK.N | 12.11 | 624.30 | 3 | 1869.89 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | R.VSPTASNMLK.M | 11.39 | 524.28 | 2 | 1046.54 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.QKEIVDLHNSLR.R | 11.09 | 484.61 | 3 | 1450.79 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.WANTcSLNHSPDNLR.V | 10.03 | 595.94 | 3 | 1784.79 | 0.99 |
|  |  |  |  |  |  |  |  |  |  | R.RVSPTASNMLK.M | 8.10 | 401.89 | 3 | 1202.66 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.EIVDLHNSLRR.R | 7.12 | 451.25 | 3 | 1350.72 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.LTNcDSLLK.Q | 7.07 | 532.27 | 2 | 1062.53 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.TATPYK.L | 6.08 | 341.19 | 2 | 680.36 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | K.QSScQDDWIK.S | 5.06 | 633.32 | 2 | 1264.62 | -0.91 |
|  |  |  |  |  |  |  |  |  |  | K.QKEIVDLHNSLRR.R | 5.04 | 402.73 | 4 | 1606.91 | 0.02 |
|  |  |  |  |  |  |  |  |  |  | R.VSPTASNMLKMEWYPEAASNAER.W | 5.02 | 646.81 | 4 | 2583.21 | 2.02 |
|  |  |  |  |  |  |  |  |  |  | K.EIVDLHNSLRRR.V | 3.01 | 378.21 | 4 | 1508.80 | 1.96 |
|  |  |  |  |  |  |  |  |  |  | R.RVSPTASNmLKMEWYPEAASNAER.W | 3.01 | 918.76 | 3 | 2753.25 | -0.04 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 28e | RP28e | sp|Q90WI8 | C-type lectin BfL-1 | *Bungarus fasciatus* | 18.6 | 1 | 5.1 | 8.1 | CTL | K.YIWEWTDR.S | 8.12 | 584.78 | 2 | 1167.54 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.KYIWEWTDR.S | 3.02 | 432.88 | 3 | 1295.61 | -0.02 |
|  |  |  |  |  |  |  |  |  |  | R.SRTDFLPWRK.K | 3.02 | 653.34 | 2 | 1304.66 | -0.04 |
|  |  |  |  |  |  |  |  |  |  | K.YIWEWTDRSR.T | 3.01 | 705.87 | 2 | 1409.73 | -0.94 |
|  |  |  |  |  |  |  |  |  |  | K.TWFDAEmYcRK.F | 2.01 | 508.62 | 3 | 1522.83 | 1.19 |
|  |  |  |  |  |  |  |  |  |  | R.DTKKK.Y | 2.00 | 311.18 | 2 | 620.34 | 1.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 28f | RP28f | sp|O93472 | Cytotoxin 2c | *Naja sputatrix* | 9.1 | 3 | 35.0 | 21.5 | 3FTx | K.MYMVATPK.V | 9.10 | 470.73 | 2 | 939.45 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.NLcYKMYmVATPK.V | 3.01 | 545.28 | 3 | 1632.82 | -0.95 |
|  |  |  |  |  |  |  |  |  |  | K.RGcIDVYPKSSLLVK.Y | 1.00 | 434.94 | 4 | 1735.74 | 1.79 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 29a | RP29a | sp|Q91132 | Cobra venom factor | *Naja kaouthia* | 184.5 | 2 | 2.2 | 36.1 | CVF | K.LILNIPLNAQSLPITVR.T | 7.06 | 625.72 | 3 | 1874.13 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.RSSVLLLDSNASK.A | 7.01 | 694.81 | 2 | 1387.60 | -1.16 |
|  |  |  |  |  |  |  |  |  |  | K.YVLPSFEVR.L | 6.02 | 554.79 | 2 | 1107.57 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | K.LEGDPGARVGLVAVDK.A | 6.02 | 797.60 | 2 | 1593.19 | -1.68 |
|  |  |  |  |  |  |  |  |  |  | K.AVYVLNDKYKISQAK.I | 6.02 | 869.96 | 2 | 1737.90 | -1.06 |
|  |  |  |  |  |  |  |  |  |  | K.QLDIFVHDFPR.K | 6.02 | 694.44 | 2 | 1386.87 | 1.16 |
|  |  |  |  |  |  |  |  |  |  | R.VFSMDHNTSKMNK.T | 6.01 | 769.89 | 2 | 1537.77 | 0.07 |
|  |  |  |  |  |  |  |  |  |  | K.VFFIDLQMPYSVVK.N | 6.01 | 843.49 | 2 | 1684.97 | 0.08 |
|  |  |  |  |  |  |  |  |  |  | K.DLNLDITIELPDR.E | 6.01 | 763.49 | 2 | 1524.97 | -0.83 |
|  |  |  |  |  |  |  |  |  |  | R.RSSVLLLDSNASKAAEFQDQDLR.K | 6.01 | 1282.51 | 2 | 2563.00 | 0.70 |
|  |  |  |  |  |  |  |  |  |  | R.VGLVAVDK.A | 5.05 | 400.75 | 2 | 799.48 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.SDLLPTK.D | 5.04 | 386.73 | 2 | 771.44 | -0.99 |
|  |  |  |  |  |  |  |  |  |  | K.VAVIIYLNK.V | 5.03 | 516.29 | 2 | 1030.57 | -1.07 |
|  |  |  |  |  |  |  |  |  |  | R.AILHNYVNEDIYVR.V | 5.02 | 572.94 | 3 | 1715.81 | -2.07 |
|  |  |  |  |  |  |  |  |  |  | K.VFAMAAKMVAGISHEIIcGGVR.W | 5.02 | 772.75 | 3 | 2315.24 | -0.95 |
|  |  |  |  |  |  |  |  |  |  | K.VVPEGVQKSIVTIVKLDPR.A | 5.01 | 692.95 | 3 | 2075.84 | -0.39 |
|  |  |  |  |  |  |  |  |  |  | K.SIPDSLTRIPIIDGDGK.A | 5.01 | 599.67 | 3 | 1796.00 | 0.03 |
|  |  |  |  |  |  |  |  |  |  | K.SMTAIAYQTQGGSGNYLHVAITSTEIK.P | 5.01 | 947.84 | 3 | 2840.49 | 0.09 |
|  |  |  |  |  |  |  |  |  |  | R.ASSSWLTAYVVKVFAmAAK.M | 5.01 | 683.32 | 3 | 2046.93 | 1.86 |
|  |  |  |  |  |  |  |  |  |  | R.QPRRDGQNLVTMNLHITPDLIPSFR.F | 5.01 | 1459.58 | 2 | 2917.15 | -0.39 |
|  |  |  |  |  |  |  |  |  |  | K.VFFIDLQMPYSVVKNEQVEIR.A | 5.01 | 851.69 | 3 | 2552.06 | -1.27 |
|  |  |  |  |  |  |  |  |  |  | K.DTcmGTLVVKGDNLIQmPGAAMK.I | 5.01 | 827.47 | 3 | 2479.38 | -1.79 |
|  |  |  |  |  |  |  |  |  |  | R.IPIIDGDGK.A | 4.05 | 464.26 | 2 | 926.51 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.ISYIITK.N | 4.03 | 419.26 | 2 | 836.51 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.GIYTPGSPVLYR.V | 4.02 | 662.11 | 2 | 1322.20 | 0.50 |
|  |  |  |  |  |  |  |  |  |  | R.FVAYYQVGNNEIVADSVWVDVK.D | 4.02 | 629.13 | 4 | 2512.49 | -1.75 |
|  |  |  |  |  |  |  |  |  |  | R.SSVLLLDSNASKAAEFQDQDLR.K | 4.02 | 1203.93 | 2 | 2405.85 | -0.36 |
|  |  |  |  |  |  |  |  |  |  | R.AKGVGGTQLEVIKAR.K | 4.01 | 763.09 | 2 | 1524.17 | -1.72 |
|  |  |  |  |  |  |  |  |  |  | K.ALSSRAVPFVIVPLEQGLHDVEIK.A | 4.01 | 1308.89 | 2 | 2615.76 | -0.70 |
|  |  |  |  |  |  |  |  |  |  | R.KccEDVMHENPmGYTcEK.R | 4.01 | 1153.46 | 2 | 2304.91 | 2.03 |
|  |  |  |  |  |  |  |  |  |  | R.MAAPVIATYYLDTTEQWETLGINR.R | 4.01 | 689.52 | 4 | 2754.06 | -1.29 |
|  |  |  |  |  |  |  |  |  |  | R.VmKVFFIDLQmPYSVVK.N | 4.01 | 692.90 | 3 | 2075.68 | 0.60 |
|  |  |  |  |  |  |  |  |  |  | K.GALMLKIcTR.Y | 4.01 | 581.90 | 2 | 1161.79 | 0.16 |
|  |  |  |  |  |  |  |  |  |  | K.LNHLIITPSGcGEQNMIR.M | 4.01 | 1026.90 | 2 | 2051.78 | -0.24 |
|  |  |  |  |  |  |  |  |  |  | R.TNHGDLPRER.Q | 4.01 | 598.22 | 2 | 1194.42 | 0.83 |
|  |  |  |  |  |  |  |  |  |  | R.TEAVNQIVTGYAQQmVYKK.A | 4.01 | 729.02 | 3 | 2184.04 | -2.07 |
|  |  |  |  |  |  |  |  |  |  | K.ADHSYAAFTNRASSSWLTAYVVK.V | 4.01 | 848.54 | 3 | 2542.59 | -1.65 |
|  |  |  |  |  |  |  |  |  |  | R.VGLVAVDKAVYVLNDKYK.I | 4.01 | 665.33 | 3 | 1992.98 | -0.14 |
|  |  |  |  |  |  |  |  |  |  | R.QNQYVVVQVTGPQVR.L | 4.01 | 858.93 | 2 | 1715.85 | 1.93 |
|  |  |  |  |  |  |  |  |  |  | K.mVAGISHEIIcGGVR.W | 4.00 | 807.53 | 2 | 1613.05 | -0.75 |
|  |  |  |  |  |  |  |  |  |  | K.FHLNVSVENIHLNAmGAKGALmLKIcTR.Y | 4.00 | 1586.10 | 2 | 3170.18 | 1.55 |
|  |  |  |  |  |  |  |  |  |  | K.mVAGISHEIIcGGVRWLILNR.Q | 4.00 | 804.24 | 3 | 2409.71 | 0.44 |
|  |  |  |  |  |  |  |  |  |  | R.LSKGVDR.Y | 3.03 | 386.72 | 2 | 771.43 | -2.01 |
|  |  |  |  |  |  |  |  |  |  | R.AKGVGGTQLEVIK.A | 3.03 | 649.88 | 2 | 1297.75 | -1.01 |
|  |  |  |  |  |  |  |  |  |  | K.KATNYLLKK.Y | 3.02 | 359.53 | 3 | 1075.55 | -2.10 |
|  |  |  |  |  |  |  |  |  |  | R.VELLYNPAFcSASTK.G | 3.02 | 425.42 | 4 | 1697.64 | -1.19 |
|  |  |  |  |  |  |  |  |  |  | R.LSKGVDRYISR.Y | 3.02 | 647.26 | 2 | 1292.51 | -0.21 |
|  |  |  |  |  |  |  |  |  |  | K.DLTEEPNSQGISSKTMSFYLR.D | 3.02 | 1201.52 | 2 | 2401.02 | -1.12 |
|  |  |  |  |  |  |  |  |  |  | K.VSHSEDEcLHFK.I | 3.01 | 744.49 | 2 | 1486.97 | 0.32 |
|  |  |  |  |  |  |  |  |  |  | K.GVDRYISR.Y | 3.01 | 483.23 | 2 | 964.45 | -0.06 |
|  |  |  |  |  |  |  |  |  |  | K.cPQPANRRR.R | 3.01 | 578.80 | 2 | 1155.59 | 2.01 |
|  |  |  |  |  |  |  |  |  |  | R.AVPFVIVPLEQGLHDVEIK.A | 3.01 | 701.23 | 3 | 2100.68 | -1.50 |
|  |  |  |  |  |  |  |  |  |  | R.RTEAVNQIVTGYAQQmVYKK.A | 3.01 | 586.15 | 4 | 2340.58 | -1.62 |
|  |  |  |  |  |  |  |  |  |  | K.ISYIITKNTWIER.W | 3.01 | 819.19 | 2 | 1636.37 | 0.48 |
|  |  |  |  |  |  |  |  |  |  | K.cQEALNLK.V | 3.01 | 487.33 | 2 | 972.66 | -1.83 |
|  |  |  |  |  |  |  |  |  |  | K.DKISYIITKNTWIER.W | 3.01 | 626.74 | 3 | 1877.21 | -1.81 |
|  |  |  |  |  |  |  |  |  |  | K.GNANSLKQIK.Y | 3.01 | 537.16 | 2 | 1072.30 | 0.70 |
|  |  |  |  |  |  |  |  |  |  | K.GVGGTQLEVIKAR.K | 3.01 | 664.40 | 2 | 1326.78 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.AVYVLNDKYK.I | 3.01 | 606.87 | 2 | 1211.73 | 0.07 |
|  |  |  |  |  |  |  |  |  |  | K.ARKLDDR.V | 3.00 | 437.75 | 2 | 873.49 | 1.01 |
|  |  |  |  |  |  |  |  |  |  | R.RDGQNLVTmNLHITPDLIPSFR.F | 3.00 | 851.39 | 3 | 2551.15 | -1.16 |
|  |  |  |  |  |  |  |  |  |  | R.PYTTALTAYALAAADQLNDDR.V | 3.00 | 751.41 | 3 | 2251.20 | -1.89 |
|  |  |  |  |  |  |  |  |  |  | K.ATNYLLKK.Y | 3.00 | 475.84 | 2 | 949.66 | 0.10 |
|  |  |  |  |  |  |  |  |  |  | K.IFKVGR.Q | 2.05 | 360.71 | 2 | 719.41 | 0.96 |
|  |  |  |  |  |  |  |  |  |  | K.QGTDENPR.A | 2.04 | 458.32 | 2 | 914.64 | -0.77 |
|  |  |  |  |  |  |  |  |  |  | K.VNDDYLIWGSR.S | 2.03 | 446.25 | 3 | 1335.73 | -0.91 |
|  |  |  |  |  |  |  |  |  |  | K.TLFQTR.V | 2.03 | 384.24 | 2 | 766.46 | 2.04 |
|  |  |  |  |  |  |  |  |  |  | K.cPQPANR.R | 2.03 | 421.77 | 2 | 841.52 | 0.13 |
|  |  |  |  |  |  |  |  |  |  | K.THQYISQR.K | 2.02 | 515.84 | 2 | 1029.67 | -1.84 |
|  |  |  |  |  |  |  |  |  |  | R.VFSmDHNTSK.M | 2.02 | 591.28 | 2 | 1180.54 | 0.02 |
|  |  |  |  |  |  |  |  |  |  | K.GIcVAEPYEIR.V | 2.02 | 436.24 | 3 | 1305.71 | 0.07 |
|  |  |  |  |  |  |  |  |  |  | K.FDQTGPIVR.W | 2.02 | 517.26 | 2 | 1032.50 | 0.96 |
|  |  |  |  |  |  |  |  |  |  | K.TMSFYLR.D | 2.02 | 458.79 | 2 | 915.57 | -0.88 |
|  |  |  |  |  |  |  |  |  |  | R.SSVLLLDSNASK.A | 2.01 | 617.43 | 2 | 1232.84 | 0.18 |
|  |  |  |  |  |  |  |  |  |  | R.IDVPLQIEK.A | 2.01 | 527.75 | 2 | 1053.48 | -0.13 |
|  |  |  |  |  |  |  |  |  |  | R.YIKGVR.D | 2.01 | 367.70 | 2 | 733.39 | -1.06 |
|  |  |  |  |  |  |  |  |  |  | K.GQRYR.Q | 2.01 | 340.19 | 2 | 678.36 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | R.KYVLPSFEVR.L | 2.01 | 618.38 | 2 | 1234.74 | -1.95 |
|  |  |  |  |  |  |  |  |  |  | K.ATNYLLK.K | 2.01 | 410.71 | 2 | 819.41 | -2.06 |
|  |  |  |  |  |  |  |  |  |  | K.ccEDVmHENPMGYTcEK.R | 2.01 | 1087.51 | 2 | 2173.01 | -1.78 |
|  |  |  |  |  |  |  |  |  |  | K.TKLLR.I | 2.00 | 315.69 | 2 | 629.36 | -0.06 |
|  |  |  |  |  |  |  |  |  |  | K.MKKFDQTGPIVR.W | 2.00 | 474.30 | 3 | 1419.89 | 1.12 |
|  |  |  |  |  |  |  |  |  |  | R.ASSSWLTAYVVK.V | 2.00 | 328.99 | 4 | 1311.95 | 1.26 |
|  |  |  |  |  |  |  |  |  |  | K.IWDTIEK.S | 2.00 | 452.71 | 2 | 903.41 | -0.06 |
|  |  |  |  |  |  |  |  |  |  | K.IDDAKK.S | 1.01 | 345.88 | 2 | 689.74 | 1.36 |
|  |  |  |  |  |  |  |  |  |  | K.GVRDENQR.E | 1.01 | 324.76 | 3 | 971.27 | -1.20 |
|  |  |  |  |  |  |  |  |  |  | K.SIVTIVK.L | 1.00 | 380.26 | 2 | 758.50 | 0.01 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 29b | RP29b | sp|Q9PVK7 | Zinc metalloproteinase-disintegrin-like cobrin | *Naja kaouthia* | 67.7 | 3 | 8.3 | 42.5 | SVMP | K.YIEFYmVVDNIMYR.H | 19.15 | 936.44 | 2 | 1870.87 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | K.TSAAVVQDYSK.S | 18.23 | 584.79 | 2 | 1167.57 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | K.ATLDLFGEWR.E | 16.19 | 604.31 | 2 | 1206.60 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.MVAITmAHEMGHNLGMNHDK.G | 12.02 | 564.00 | 4 | 2251.99 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.NSMIcNcSISPRDPSYGmVEPGTK.C | 10.01 | 906.40 | 3 | 2716.17 | 1.00 |
|  |  |  |  |  |  |  |  |  |  | R.NQLVIK.R | 9.19 | 357.73 | 2 | 713.44 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.EITTSPPVQDHcYYHGYFQNEADSSAVISAcDGLKGHFK.L | 9.02 | 738.71 | 6 | 4426.19 | -1.79 |
|  |  |  |  |  |  |  |  |  |  | K.ATLDLFGEWREK.K | 9.01 | 732.87 | 2 | 1463.73 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | -.mIQLSWSSIILESGNVNDYEVVYPQK.V | 8.02 | 1009.78 | 3 | 3026.32 | -1.17 |
|  |  |  |  |  |  |  |  |  |  | K.KRNSMIcNcSISPR.D | 8.01 | 861.41 | 2 | 1720.80 | -1.01 |
|  |  |  |  |  |  |  |  |  |  | K.TSAAVVQDYSKSTR.M | 7.04 | 504.93 | 3 | 1511.77 | 0.01 |
|  |  |  |  |  |  |  |  |  |  | R.NQLVIKR.K | 6.03 | 435.78 | 2 | 869.55 | 0.00 |
|  |  |  |  |  |  |  |  |  |  | R.RLNFHIALIGLEIWSNINEINVQSDVK.A | 6.01 | 1045.53 | 3 | 3133.56 | -1.13 |
|  |  |  |  |  |  |  |  |  |  | K.RNQLVIK.R | 4.03 | 436.28 | 2 | 870.54 | 0.99 |
|  |  |  |  |  |  |  |  |  |  | K.RNQLVIKR.K | 2.02 | 513.39 | 2 | 1024.77 | -0.88 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 29c | RP29c | sp|P60301 | Cytotoxin 3 | *Naja atra* | 9.0 | 1 | 13.3 | 10.0 | 3FTx | K.TcPPGKNLcYKMFMVATPK.V | 3.02 | 747.71 | 3 | 2240.10 | -1.97 |
|  |  |  |  |  |  |  |  |  |  | K.TcPPGKNLcYK.M | 2.02 | 447.01 | 3 | 1338.02 | 1.39 |
|  |  |  |  |  |  |  |  |  |  | K.YVccNTDK.C | 2.00 | 529.34 | 2 | 1056.66 | -1.75 |
|  |  |  |  |  |  |  |  |  |  | K.KLVPLFSK.T | 1.02 | 466.34 | 2 | 930.66 | 0.07 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30a | RP30a | sp|A8QL58 | L-amino-acid oxidase (Fragment) | *Naja atra* | 51.4 | 4 | 10.5 | 43.4 | LAAO | K.LNEFFQENENAWYYINNIR.K | 14.11 | 826.39 | 3 | 2476.14 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | K.VTLLEASER.V | 10.13 | 509.28 | 2 | 1016.54 | -0.01 |
|  |  |  |  |  |  |  |  |  |  | R.VITYHNDREGWYVNmGPmR.L | 4.03 | 593.79 | 4 | 2371.15 | 2.08 |
|  |  |  |  |  |  |  |  |  |  | K.TFVTADYVIVcSTSR.A | 4.01 | 573.28 | 3 | 1716.83 | -1.01 |
|  |  |  |  |  |  |  |  |  |  | K.KTSNPKHVVVVGAGMAGLSAAYVLAGAGHK.V | 4.01 | 964.48 | 3 | 2890.43 | 0.86 |
|  |  |  |  |  |  |  |  |  |  | K.EYLIKEGNLSRGAVDmIGDLLNEDSSYHLSFMESLK.S | 4.01 | 1023.77 | 4 | 4091.05 | 2.08 |
|  |  |  |  |  |  |  |  |  |  | R.VTYQTPAKTFVTADYVIVcSTSRAAR.R | 3.01 | 726.61 | 4 | 2902.41 | -2.07 |
|  |  |  |  |  |  |  |  |  |  | K.SASQLYQEPLR.K | 3.01 | 645.47 | 2 | 1288.93 | -1.73 |
|  |  |  |  |  |  |  |  |  |  | R.SIHYRSATKIFLTcSK.K | 3.01 | 478.24 | 4 | 1908.94 | -2.07 |
|  |  |  |  |  |  |  |  |  |  | R.VGGRVITYHNDR.E | 3.01 | 692.85 | 2 | 1383.69 | -2.02 |
|  |  |  |  |  |  |  |  |  |  | R.VITYHNDR.E | 3.01 | 508.46 | 2 | 1014.91 | -1.59 |
|  |  |  |  |  |  |  |  |  |  | R.VTYQTPAK.T | 3.01 | 453.74 | 2 | 905.47 | -1.02 |
|  |  |  |  |  |  |  |  |  |  | K.IQYDAEK.V | 3.00 | 434.69 | 2 | 867.36 | 1.94 |
|  |  |  |  |  |  |  |  |  |  | K.KDPSLLK.Y | 2.02 | 401.24 | 2 | 800.46 | 0.98 |
|  |  |  |  |  |  |  |  |  |  | R.VIKIQYDAEKVR.V | 2.01 | 730.95 | 2 | 1459.88 | -0.95 |
|  |  |  |  |  |  |  |  |  |  | K.TSNPKHVVVVGAGMAGLSAAYVLAGAGHKVTLLEASER.V | 2.01 | 538.18 | 7 | 3760.18 | 0.17 |
|  |  |  |  |  |  |  |  |  |  | K.YPVKPSEEGKSASQLYQEPLR.K | 2.01 | 344.87 | 7 | 2407.04 | 1.82 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30b | RP30b | sp|P25669 | Long neurotoxin 2 | *Naja naja* | 7.8 | 3 | 33.8 | 57.8 | 3FTx | K.DcPNGHVcYTKTWcDGFcSSRGK.R | 5.01 | 930.83 | 3 | 2789.46 | -1.67 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.01 | 326.87 | 8 | 2606.93 | 0.92 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.00 | 522.39 | 5 | 2606.93 | 0.91 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 3.02 | 870.33 | 3 | 2607.97 | 1.95 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSR.G | 2.01 | 373.10 | 7 | 2604.67 | -1.35 |
|  |  |  |  |  |  |  |  |  |  | K.DcPNGHVcYTKTWcDGFcSSRGK.R | 1.01 | 558.92 | 5 | 2789.58 | -1.56 |

**Supplementary Table S4:** Enzymatic activities of WI *N. naja* venom (20 μg/ml).

|  |  |
| --- | --- |
| Enzyme Assay | **Activity (units/mg)** |
| ATPase a | 13278.6 ± 0.0001 |
| ADPase a | 11882.8 ± 0.031 |
| AMPase a | 11757.8 ± 0.031 |
| Acetylcholinesterase b | 350.0 ± 0.014 |
| Phosphodiesterase c | 30.9 ± 0.0007 |
| PLA2 d | 2645.9 ± 0.0003 |
| Metalloprotease e | 1.21 x 10-1 ± 0.0013 |
| BAEE f | 56.4 ± 0.0019 |
| TAME g | 7.0 ± 0.0042 |
| LAAO h | 30.5 ± 0.008 |
| Hylauronidase i | 98.04 ± 0.006 |

Values are mean ± S.D. of triplicate determinations.

a Unit activity is defined as μM Pi released per min.

b Unit activity is defined as the amount of protein which hydrolysed0.01 mg of acetylcholine iodide in 1 min in 3 ml of 0.0092 M acetylcholine iodide.

c Unit activity is defined as μmol of p-nitrophenol released per min (using 17,600 as molar extinction coefficient).

d Unit activity is defined as the amount of protein which produces a decrease in 0.01 absorbance in 10 min at 740 nm.

e Unity activity is defined as change in OD per minute (ΔA450nm/min)

f Unit activity is defined as increase of 0.01 absorbance unit at 254 nm during the first 10 min of the reaction at 37 °C.

g Unit activity is defined as increase of 0.01 absorbance unit at 244 nm during the first 10 min of the reaction at 37 °C.

h Unit activity is defined as nmol kynurenic acid produced/min under the assay conditions.

i Unit activity is defined as the relative decrease in turbidity reduction unit (TRU) per min per mg of protein in 30 min of reaction at 37 °C.

**Supplementary Table S5:** A list of common and unique proteins identified in EI NnV (Dutta et al., 2017) and WI NnV (present study). The values in the parenthesis represent the relative abundance of the toxin in the respective proteome.

|  |  |  |  |
| --- | --- | --- | --- |
| **Unique proteins in EINnV** | **Common proteins** | | **Unique proteins in WINnV** |
| **EINnV** | **WINnV** |
| **Three finger toxins** | | | |
| giǀ117667 (3.6%) | giǀ117681 (6.8%) | P86540.2 (4.5%) | AAK49439.1 (4.8%) |
| giǀ117680 (4.7%) | giǀ298351637 (1.5%) | P86538.2 (0.7%) | JAB52868.1 (1.4%) |
| giǀ117725 (2.8%) | giǀ85687562 (0.6%) | CAA90964.1 (5.7%) | APB88857.1 (0.5%) |
| giǀ4388776 (1.4%) | giǀ28380029 (7.6%) | P01427.1 (3.5%) | P29179.1 (1.9%) |
| giǀ299268 (0.4%) |  |  | AAD40974.1 (1.0%) |
| giǀ128932 (3.7%) |  |  | JAA74929.1 (0.4%) |
| giǀ3334611 (0.3%) |  |  | ABK63537.1 (0.4%) |
| giǀ46397633 (2.7%) |  |  | JAA74796.1 (0.2%) |
| giǀ28380028 (0.1%) |  |  | P25672.1 (4.6%) |
| giǀ157834776 (9.2%) |  |  | P25669.1 (10.9%) |
| giǀ2688936 (0.4%) |  |  | P82464.1 (4.1%) |
| giǀ311033516 (3.2%) |  |  | P01391.1 (4.3%) |
| giǀ4165568 (1.9%) |  |  | P0CAR1.1 (0.3%) |
| giǀ232522 (3.5%) |  |  | P01447.1 (0.2%) |
| giǀ136560 (0.2%) |  |  | P24779.1 (0.6%) |
| giǀ12230756 (4.4%) |  |  | P82463.1 (10.3%) |
| giǀ12230755 (1.8%) |  |  | P85092.1 (0.2%) |
| giǀ12230754 (1.5%) |  |  | BAU24665.1 (5.4%) |
| giǀ164605303 (0.3%) |  |  | AAB18383.1 (0.3%) |
| **Phospholipase A2** | | | |
| giǀ 24638099 (2.0%) | giǀ 129514 (4.7%) | AAR16428.1 (0.3%) | - |
| giǀ 24638468 (4.4%) | P15445.1 (6.6%) |
| **Snake venom metalloprotease** | | | |
| giǀ 32469675 (1.0%) | giǀ 82223366 (1.0%) | AAF00693.1 (1.3%) | AAM51550.1 (1.3%) |
| giǀ 294845712 (1.0%) | JAS05092.1 (0.01%) |
|  | D3TTC2.1 (0.9%) |
|  | ACN50006.1 (0.9%) |
|  | ADF43026.1 (0.73%) |
|  | ACN50005.1 (0.7%) |
|  | ADG02948.1 (0.71%) |
|  | P82942.1 (0.66%) |
| **Cysteine-rich secretory protein** | | | |
| giǀ85543949 (1.7%) | giǀ485956112 (0.4%) | ACH73168.1 (1.2%) | ACH73167.1 (0.9%) |
|  |  | P0DL16.1 (0.2%) |
|  |  | P84807.1 (0.2%) |
| **Cobra Venom Factor** | | | |
| - | giǀ319443756 (1.1%) | Q91132.1 (0.2%) | AAX86641.1 (0.1%) |
|  | AFJ59923.1 (0.2%) | I2C090.1 (0.2%) |
| **Nerve Growth Factor** | | | |
| - | giǀ82080590 (0.9%) | A59218 (0.3%) | AAS94269.1 (1.0%) |
| **Ohanin like proteins** | | | |
| - | giǀ32363235 (1.3%) | P82885.1 (4.4%) | - |
| **L-Amino Acid Oxidase** | | | |
| - | giǀ 347602454 (0.8%) | A8QL58.1 (1.3%) | - |
| **Kunitz-type serine protease inhibitor** | | | |
| - | gi|125050 (0.4%) | P20229.1 (4.0%) | - |
| **Phospholipase B** | | | |
| ND | - | | F8J2D3.1 (0.07%) |
| **Aminopeptidase** | | | |
| ND | - | | JAB54710.1 (0.1%) |
| **5'-Nucleotidase** | | | |
| giǀ 565292399 (0.4%) | - | | JAI09047.1 (1.7%) |
| **Snake venom serine protease** | | | |
| giǀ 387935404 (0.3%) | - | | ABN72541.1 (0.9%) |
| **Acetylcholinesterase** | | | |
| gi|1389604 (3.5%) | - | | JAA74736.1 (0.1%) |
| gi|565297659 (2.8%) |
| **Cholinesterase** | | | |
| gi|565319474 (5.9%) | - | | ND |
| **Phosphodiesterase** | | | |
| gi|565320420 (2.1%) | - | | JAI09046.1 (1.3%) |
| **Cystatin** | | | |
| ND | - | | ACR83850.1 (0.7%) |
| **Natriuretic peptides** | | | |
| gi|374253733 (2.0%) | - | | ND |

ND - not detected by LC-MS/MS analysis

**Supplementary Table S6**. Comparison of the total proteins identified in EI (Dutta et al., 2017) and WI NnV (present study) by proteomic analysis.

|  |  |  |  |
| --- | --- | --- | --- |
| **Protein family** | **No. of proteins/ Relative abundance (%)** | | |
| **Eastern India *N. naja*** | **Western India *N. naja*** | |
| **Enzymatic proteins** | | | |
| Phospholipase A2 | 3/ 11.4 | | 2/ 7.0 |
| Phospholipase B | ND | | 1/ 0.07 |
| Phosphodiesterase | 1/ 2.1 | | 1/ 1.3 |
| Snake Venom Metalloprotease | 3/ 1.0 | | 9/ 7.3 |
| Nucleotidase | 1/ 0.4 | | 1/ 1.72 |
| Acetylcholinesterase | 2/ 6.3 | | 1/ 0.1 |
| Cholinesterase | 1/5.9 | | ND |
| L-amino acid oxidase | 1/ 0.8 | | 1/ 1.3 |
| Aminopeptidase | ND | | 1/ 0.1 |
| Snake Venom Serine protease | 1/ 0.3 | | 1/ 0.9 |
| **Non- enzymatic proteins** | | | |
| Cysteine-rich secretory protein | 2/ 2.1 | | 4/ 2.51 |
| Kunitz-type serine protease inhibitor | 1/ 0.4 | | 1/ 4.0 |
| Ohanin like protein | 1/ 1.3 | | 1/ 4.4 |
| Cobra venom factor | 1/ 1.1 | | 4/ 0.7 |
| Nerve Growth Factor | 1/ 0.9 | | 2/ 1.3 |
| Three Finger Toxins | 23/ 63.8 | | 23/ 66.5 |
| Natriuretic peptide | 1/2.0 | | ND |
| Cystatin | ND | | 1/0.7% |

ND: Not Detected