```
dmel            mkavlcaifvtllaaigqglptq-----------ledenhgsfagqvsqlialqllkfn
dsim            mkavlcaifvtlltavgqglptq-----------ledenqgsfagqvsqlialqllkfn
dsec            mkavlcaifvtllaavgqglptq-----------ledenqgsfagqvsqlialqllkfn
dyak            mkavlcaifvtllaafghglptq-----------lehenqgsfagqvsqlialqllkfn
dere            mkavlcaicvtllaafghglpaq-----------ladenqgsfagqvsqlialqllkfn
dana            mkavlcavfigflallvqglptq-----------gge----sfagrtsqlialqllkfn
dpse            mkavlcvlpllaalvcslptaek-----------essskgasfasatsqliamqllkfn
dper            mkavlcvlpllaalvcslptaek-----------egsskgasfasatsqliamqllkfn
dwil            mkvvvclfplllllsswvsslpta----------dkealpntftsdasqllaiqllkhn
dmoj            mkavlhllslagasivyslpslgarenalp---------ssfaseasqliatqllkhn
dvir            mkaalcllpllacanivcslpppptkedalp---------smfaseasqliatqllkhn
dgri            mkaalgliplgcisivcslpnpqtraeagpgageddkvpatfaseasqliamqllkhn
                **..     :          .                    *:. .***:* ****.*

dmel            kdidanqvh SPLGVASILAMLAEASEGDTYSEFEQVFGYPKDRTKLRDAYKRIL gsyqnr
dsim            kdidanqvh SPLGVASILAVLAEASEGDTYSEFEQVFGYPKDRTKLRDAYKRIL gsyqnr
dsec            kdidanqvh SPLGVASILAVLAEASEGDTYSEFEQVFGYPKDRTKLRDAYKRIL gsyqnr
dyak            kdidanqvh SPLGVASILAVLAEASEGDTYSEFQQVFGYPKDRTKLRDAYKRIL gsyqnr
dere            kdidanqvh SPLGVASILAVLAEASEGDTYSEFEQVFGYPKDRTKLRDAYKRIL gsyqnr
dana            kdidsnqvh SPLGVASILAVLAEASEGDTFQEFQQVFGYPKDRTQLRDIYQRIL gsyqnr
dpse            kdidanqvh SPLGVTSILGVLAEASEGETYAEFTKVFGYPKDRSQLRDVYRRVL gryqnr
dper            kdidanqvh SPLGVTSILGVLAEASEGETYAEFTKVFGYPKDRSQLRDVYRRVL gryqnr
dwil            kdidanqvh SPLGVATILAVLAEASEGATYDEFNTVFGFPKDRSALRESYKRIL gnyrnr
dmoj            kdidanqvy SPLGVATILATLAEGADGETYAEFGQVFGFPKERQQLRAAFEQAL avfqkr
dvir            kdidanqvh SPLGVASILAVLAEAAEGETYAEFGQVFGFPKERQDLRAAFQRIL gsyqnr
dgri            kdidsnqvh SPLGVATILAVLAEAAQGETYEEFSQVFGFPKERGDLRAAFQRIL anyqnr
                ****:***:*****::**. ***.::* *: **  ***:**:*  **  :.: *. :::*

dmel            daavalpsfqtwlyiyrnnsareefkdllekhyyvdvkdisrqeydwnepntslqlseek
dsim            daavalpsfqtwlyiyrnnsareefknllekhyyvdvkdisrqeydwnepntslqlseek
dsec            daavalpsfqtwlyiyrnnsareefknllekhyyvdvkdisrqeydwnepntslqlseek
dyak            daavalpsfqtwlyiyrnnsareefkdllekhyyvdvkdisrqeydwnepntslqlseek
dere            daavalpsfqtwlyiyrnnsareefkdllekhyyvdvkdisrqeydwnepntslqlseek
dana            daavalpsfqtwlyiyrnnsareefkdvlqknyfvevkdinrqeydwsepntslqleeva
dpse            daavalpsfqtwfyiyrnhsareefkellqqhyfvevkdinrkdydwnepntslqlqpeg
dper            dsavalpsfqtcfyiyrnhsareefkelrqqhyfvevkdinrkdydwnepntslqlqpeg
dwil            daavalpsfqtwlyiyrnnsaredykqlleqnyyvevkdinrqdydwsepntslqleeag
dmoj            dtvdalpsfqtwfyvyrnnsvredykqllqrhyyaevkdinreesdwqep-ssltlegsg
dvir            daavalpsfqtwfyvyrnnsvredykqllqrhyyvevkdinrqeydwsepntslqlegsg
dgri            dsavtlpsfqtwfyvyrnnsvfedykqllqsyyyvdvkdisrqdydwsepntllqldan-
                *:. :****** :*:***:*. *::*:: :  *:.:****.*:: **.** : * *.

dmel            dntdstegste------qsnskdvigfetlkriklde---dipaipsdgygqeiidkea
dsim            dntdstegste------qsnskdvigfetlkriklde---disaipadgygqeiidkea
dsec            dnadstegste------qsnskdvigfetlkriklde---dipaipadgygqeiidkea
dyak            dnadstegste------qsnskdvigfetlkriklde---dipaipadgygqeiidkea
dere            dntdategste------qsnskdvigfetlkrikldedipdipaipadgygqeiidkea
dana            d-----gsnte------psnskdvigfetlkrikldeg---ddvpaipdsygqeiidkea
dpse            sgsdaseageeslssteqsnskdvigfetlkrinlddd----llsvpadtygeevldkea
dper            sgsdapeaaaeaa-----------------------------------------------
dwil            advdirtepsn---------skdvigfetlkrinvddd----vplvttdtygveivnkea
dmoj            tdgdstepsns----------kdvigfetlkrinvddd---apigisedsygeevvnkea
dvir            advdstepsns----------kdvigfetlkrinlddd---aplvps-dtygeevlnkea
dgri            -----nkssng----------kdvigfetlkriklddd---daplatsdnygeevldkea


dmel            skfdrdvddkqyvekpvaqaeaellqkeqkqqatteseles--------qpeetttlsve
dsim            skfdrdvddk-------------------------------------------------
dsec            skfdrdvddkqyvekpvaqaeaellqkeqkqqatteseles--------qpeetttlave
dyak            skfdrdvddkqyvekpvaqaeaellqkeqkqqattvseles--------qpeetttlave
dere            skfdrdvddkqyvekpvaqaeaellqqeqkqqatteleleles------qpeetttlave
dana            skfdrevddkqyvekpvaqaeadqlqkeqaaatteselesqsep-----eattaaaivae
dpse            skldrdvddkqyvekpvaqaeaeqlqreqaaatttteaeaeattpeaeaa----------
dper            ---aeaaaeavekqekqaia-------------------------aeaaaeaaaeavek
dwil            skfdrevddkqyvekpvalaeavqmlkeqpfttesaeaaat--------tdaaadmekle
dmoj            skfdrevddkqyvekpvalaeaeqlqs-----ereqltteqtat---dadssssthapv
dvir            skfdrevddkqyvekpvalaeaaeqlqrdqerereqlttelsat---eaasss--tdapv
dgri            skfdrdvddkqyvekpvalaeaqlatea--------------------------avagt


dmel            kqekpdmaaeenpaekqqnkrsdqe----esqiknleenetvqeeeklakimaap-----
dsim            qyekpdmaaeenpaekqqnkrsdqe----esqiknleenetvqeeeklakimaap-----
dsec            kqekpdmaaeenpaekqqnkrsdqe----esqiknleenetvqeeeklakimaap-----
dyak            kqekpdvaaeenpaekqqnkrsdqe----esqiknleenetvqeeeklakimaat-----
dere            kqekpdmaaeenpaekqqnkrsdqe----esqiknleenetvqeeeklakimaas-----
dana            kqekpdmtveenpvekqqnkrsdqengpeesqiknleenetvqeeeklaklvpvdn---a
dpse                  aaagenpvekqqnkrsdneen--qsqnlnleenetvqeeeklrkvvgse-----
dper            qekqaiaaagenpvekqqnkrsdneen--qsqnlnleenetvqeeeklrkvvgse-----
dwil            kpaepamageenladkqqnkreenlqan-------veenetvqedeklnkqpman-----
dmoj            eklekpaeialtvkenvaekqqnkrsdanaeqnpnieenetvqedeklrkllpsdqgnaa
dvir            eklekpaeialtveenvaakqqnkrs--daeqnpndeenetvqedeklrklln-epsngg
dgri            ekpvipddtlivtsgdsdvdirlptkrsgseqqpnveenetvqedekihkqls-----ta
                :             .   .               ********:**: *

dmel            -altagepekvrlplqklenavktaakdg--adeimlaleshlpsvsrvngarslfqqdd
dsim            -altagepekvrlplqklenavktaakdg--adeimlaleshlpsvsrvngarslfqqdd
dsec            -altagepekvrlplqklenavktaakdg--adeimlaldshlpsvsrvngarslfqqdd
```

```
dyak            -altagepekvrlplqklenavksaakdg--adeimlaleshlpsvsrvngarslfqqdd
dere            -altagepekvrlplqklenavktaakdg--adeimialeshlpsvsrvngarslfqrdd
dana            aavtagepekvrlplekl esavkavtkdg--adeimialeshlasvsraygarslfrqdd
dpse            -avtagepekvrlplqklesavntaaskeggadeimlaleshlgavsrvygarslfrqdd
dper            -avtagepekvrlplqklesavntaaskeggadeimlaleshlgavsrvygarslfrqdd
dwil            eqvtagepekvrlplqklenavktavkds--adeimlaleshlsavsrvygarslfrrdd
dmoj            nqvtasepekvrlplqklenavksmvkeg--adeimlaleshlssvarvyggrslfrkdd
dvir            nqvtagepekvrlplqklenavksmvkeg--adeimialeshlstvaraysarslfrqdd
dgri            dqvtdgepekvrlplqkletavksmikeg--adeimialeshlsnvaraygarslfrqdd
                  :* .*********:***.**::  ..   *****:**:***  *:*. ..****::**

dmel            itsalsansitgrsagSKSKMLLFNGLYYRGSWANPFYQLRDGSDEFFFMTNEDAVKAPM
dsim            itsalsansitgrsagSKSKMLLFNGLYYRGSWANPFYQLRDGSDEFFFMTNEDAMKAPM
dsec            ITSALSANSITGRSARSKSKMLLFNGLYYRGSWANSFYQLRDGSDEFFFMTNEDAMKAPM
dyak            itsalsansitgrsagSKSKMLLFNGLYYRGSWANPFYQLRDGSDEFFFMTNEDAMKAPM
dere            itsalsansitgrsagSKSKMLLFNGLYYRGSWANPFYQLRDGSDEFFFMTNEDAMKAPM
dana            itsalsansitgrsagSKSKMLLFNGLYYRGSWANPFYQLRDGSDEFFFMTNEDAMKAPM
dpse            itsalsansitgrsagAKSKMLLFNGLYYRGSWATPFYQLRDGSDEFFFMTNEDAMKAPM
dper            itsalsansitgrsagAKSKMLLFNGLYYRGSWATPFYQLRDGSDEFFFMTNEDAMKAPM
dwil            iasalsansitgrsagSKSKMLLFNGLYYRGSWAQPFYQLRDGSDEFFFMTNEDAMQAPM
dmoj            iacalsanaitgrandAKTKMLLFNGLYFHGSWRQPFYQLRDGSDEFFFMTNEDAMKTPM
dvir            iasalsansitgrelgSKSKMLLFNGLYYRGSWAQPFYQLRDGSDEFFFMTNEDAVKTPM
dgri            iasalsansitgravdSKSKMLLFNGLYYRGSWAQPFHQLRDGSDEFFFMTSEDAMKTPM
                *:.*****:****   :*:*********::***  .*:**************.***:::**

dmel            MHARGKFQVADLPQVKARVLSLPYETSRYALCIVLPDETEGLSDVISQLQTSDFLLAKKQ
dsim            MHARGKFQVADLPQVKARVLSLPYETSRYALCIVLPDETEGLSDVISQLQTSDFLLAKKQ
dsec            MHARGKFQVADLPQVKARVLSLPYETSRYALCIVLPDETDGLSDVISQLQTSDFLLAKKQ
dyak            MHARGKFQVADLPQVKARVLSLPYETSRYALCIVLPDETEGLSDVISQLQTSDFLLAKKQ
dere            MHARGKFQVADLSQVKARVLSLPYETSRYALCIVLPDETEGLSDVISKLQTSDFLLAKKQ
dana            MHARGKFQLAELPKLKAKVLSLPYETSRYSLCIVLPDETEGLSDVIDQLETSDFQQAHKS
dpse            MHARGQFLVADLPQLKARVLSLPYETSRYALCILLPDETEGLHDVIAQMQPSDFQLGREK
dper            MHTRGQFLVADLPQLKARVLSLPYETSRYALCILLPDETEGLHDVIAQMQPSDFQLGREK
dwil            MHTKGKFYVADLPQLKARVLSLPYENEKYGLSIVLPNETEGLSEVIAQMQPSDFKYARDH
dmoj            MHARGKFNVSDLPHLKARLLSLPYENDQYSLCIVLPNEPEGLSEVIAQLEPSDYKYAREH
dvir            MHARGKYNVTDLPHLKARLLSVPYENAQYSLCIVLPNEPEGLSEVIAQLQPSDYKYAREH
dgri            MHAQGKFNVAELPHLKARLLALPYENAQYSLCIVLPNEAEGLSEVIAQLQPSDYRFANEH
                **::*:: :::*.::**::*::***. :*.*.*:**:*.:** :** :::.**:  ...

dmel            FQMKELHISMPKFQVEETSRSEAMLKQMGLKKVFSRTEAQLSLLSEDPDVHVDEIVQFVN
dsim            FQMKELHISLPKFQVEETSRSEAMLKQMGLKKIFSRTEAQLGLLSEDPDVHVDEIVQFVN
dsec            FQMKELHISLPKFQVEETSRSEAMLKQMGLKKIFSRTEAQLGLLSEDPDVHVDEIVQFVN
dyak            FQMKELHVSLPKFQVEETSRSEAMLKQMGLKKVFSRTEAQLGLLSEDPDVHVDEIVQFVN
dere            FQMKELHVSLPKFQVEETSRSEAMLKQMGLTKVFSRTEAQLGLLSEDPDVHVDEIVQFVN
dana            FQLKEMHVSLPKFQVEETSRSEAMLKQMGLKKLFSRTEAQLGLLSEDPDVHVDEIVQFVN
dpse            AQLRQMHVSLPKFQVEETSRSESMLKQMGLRRLFSRTEAQLGLLSEDPDVHVDEIVQFVN
dper            AQLRQMHVSLPKFQVEETSRSESMLKQMGLRRLFSRTEAQLGLLSEDPDVHVDEIVQFVN
dwil            SELKQMHVSLPKFQVEETSRSESVLKQLGLQRLFSRTDAELSLLSDDTDVHVDEIVQFVN
dmoj            ILLKELHVTLPKFQVMETSRSEAMLKQMGLKRLFSRTEAQLNLMSEDEDLHIDEIVQFVS
dvir            MQLKELHVTLPKFQVEETSRSEAMLQQLGLKRLFSRTEAQLGLLTEDEDVHVDEIVQFVN
dgri            LELRQLHVTLPKFQVEETSRSESMLKNLGLKRIFSRGEAQLGLLSEDEDLHIDEIVQFVN
                  ::::*:::***** ******::*:::** ::*** :*:*.*:::* *:*:*******.

dmel            VRVDEGGSSANSLSAATMQARTPSVESTVLPVPEPEPE-LP-GVERFEVNRPFAYFIVDC
dsim            VRVDEGGSSANSLSAATMQARTPSVESTVLPVPEPEPE-LP-GVERFEVNRPFAYFIVDC
dsec            VRVDEGGSSANSLSAATMQARTPSVESTVLPVPEPEPE-LP-GVERFEVNRPFAYFIVDC
dyak            VRVDEGGSSANSLSAATMQARTPSVESTVLPVPEPEPE-LP-GVERFEVNRPFAYFIVDC
dere            VRVDEGGSSANSLSAATMQARTPSVESTVLPVPEPEPE-LP-GVERFEVNRPFAYFIVDC
dana            VRVDEGGSSTNALSAANMQARTPSVESTVLPVPEPEP--EP-GVERFEVNRPFAYFLVDC
dpse            VRVDEGGSSANALSAATQARSPQAAEDSASVLPVPEPEPEP-GVERFEVNRPFAYFIMDC
dper            VRVDEGGSSANALSAATQARSPQAAEDSASVLPVPEPEPEP-GVERFEVNRPFAYFIMDC
dwil            VRVDEGGSSANALSAANMQARSPLASATELPVPEPEPE--P-GVERFEVNRPFAYFIMDC
dmoj            VRVDEDGSSTNSLSAGNIQARSPIAAEAAAVLPVPEPEPEP-GVERFDVNRPFAYFIVDC
dvir            VRVDEGGSSANSLSAATMQGRSPIAAEAAATLPVPEPEPEP-GVELFDVNRPFVYFVMDC
dgri            VRVDEGGSSANSLSAATTQARSPLFILQE---PEPEPEPEPEGVERFDVNRPFVYFVVDC
                *****.***:*:***..    .          * ***   * *** *:*****.**::**

dmel            QEQFVLASGKIYTPefkedlpsvsieveleqs
dsim            QEQFVLASGKIYTPefkedlpsvsveveleqs
dsec            QEQFVLASGKIYTPefkedlptvsveveleqs
dyak            QEQFVLASGKIYTPefkedlpsvsveveleqs
dere            QEQFVLASGKIYTpefkedlpsvsveveleqs
dpse            EEQFILASGKVYTpefkddlpgvsveieleqs
dper            EEQFVLASGKVYTpefkddlpgvsveieleqs
dana            EEQFVLASGKIYTpefkedlppvsieveleqs
dwil            ENQLVLASGKVYTpefkddlppvsveieleqs
dmoj            RTQVVLASGKVYApesvdelppvsieveleqs
dvir            KNQFVLASGKVYApefkdelppvsieveleqs
dgri            KNAFVLASGKIYApelkdelppvsieveleqs
                .  .:*****:*:**  ::** **:*:*****
```

Sequence stretches with serpin homology are in UPPER CASE. The PF residues at the C-terminal “shutter region” of RCL are in **RED** as are residues showing homology to the shutter-region consensus of inhibitory serpins.