

A. An alignment of *Ta1-11* and other *gypsy*-like reverse transcriptase (RT) protein sequences using the ClustalW method (fasta format)

```
>Ta1
-----FA-
MFS--MPFGLHSAP-ATFQRLMNAVL-KDLQG-VANV-LDDTIVYSASWKEHLQHLGTGIRSIATIRIKC-RIKVQFRKQ-----
>Ta2
-----LFA-
MFS--MPFGLHCAP-ATFQRLMNAVL-KDLQG-VASVYLDDTIVYSANWKEHLQHLGTGIRSIATIWIKCYRRKAQFRKQ-----
>Ta3
-----
LFKFRVMPFDMHSAP-ATFQR-----
>Ta4
-----
LYEFKVMPIGLHSAP-ATFQRLMDAVL-KDLPV-VASVYLDDIMFYSANWKEHLQHLVDFDR-RQYGFVSVKEEKCNFACNIVSYLG-HTI-----
>Ta5
-----LDLSKGYWQPIIEEESKSYTDFTPIG-
LYEFNTMPFGLQNAV-VTFKSLVNSLF-AEYSE-YVAVCLDGIVIFDQTWEQHLSHIANVFKILEAAKLT-PSKCIFAEGTVNYLG-HQIG--SGKLKP---
>Ta6
-----
LIEFNVMPIGLHNAV-GTFQQLVNTLF-GKHYE-YLAVYMDIIIFDTSWEDHSHKLEIIFKVLEDANLKLQPSKCTFAKGTVTYLG-HQIG--SGLVKP---
>Ta7
-----
LYEFEMMPFGLHNAV-ATFQSLVNSLF-AHISD-FVAVYLDDIVV-----
>Ta8
-----
LYEFEMMPFGLHNAV-ATFQSLVNSLF-AHISD-FVAVYLDDIVVYDTTWEDHLRHLKTVFQILEAANLTLQPAKCTFAKGTVTYLG-HQIG--SGVVQP---
>Ta9
-----
-----GIASAP-AIFQQLMDTMLQGIPGT--ACYLDDIIVTGKTKAHPQSLKQVLDGINTSGFSVQLNKCSFMQGKIKYLG-HVLDKNGIHMSQKKV
>Ta10
-----DAVRICGDFKVTVPVLCVDQYPLPRSEELFAALNGGSLFTKLDSEAYLQVELDPASRKYLVINTHKG-
LYRYTRLFPFIASAPPTIFQQLMDTMLQGIPGT--VCYLDDIIVTGKTTQHLQSLQVLDRIHTYGFRVKNKCSFMQKRIEYLG-HVIDKDGVMHSPRKV
>Ta11
-----
LYEFNVMPFGLTNAV-ATFQRLMNLTLGLCWI-NCIVYIDDVIVYSNTFNMHLQHLEEVFKRVDANLKLKAKCIFAAREVKFLG-HIISADGILPNPDKI
>Jule
EKMKVISKV-EKSEWASPIVTPKTD-----KTIRICGDYKVSINQCIEEKHYPLNAEDLFATLEGGTSFSKLDLSHAYQQLELDEESEKYLVINTHKG-
LYKYSRLSYGVSSAP-AIFQSVMDQILQGMHV---TCFLDDILITASSEKEHLQRLEEVLTREKHGLRVKLAKCRFLQSSVEYLG-HRIDKDGLHPMEEKV
```

>Mag

LAAGVIKPV-DHSDWATPLVVVRKAD-----GGLRICADYKVTLNKVLAI DRFPVPKMEDLFSNLSGNKFFTKLDLSQAYNQIVLSERSSEYTVINTHRG-LFKYSRLVYGLASSP-GIFQKLMVNMFKNVPNV---VVFYDDILIRNQDLD SHLKSIEVLDILERYGLKIKRSKCEFMVTEVRYLG-FIIDQNGVRVDPEKV

>SURL

ERLDVITPVDEPTDWVSSLVVMKKN-----GQLRVCLDPRD-LNRAIKREHYQLPSRAEITAHFAGAKYFSKLDASSGFWQIQLDDESSKLCTFITPYG-RYKFLRLPFGICSAP-EVYHKIVHQMF AHIPGV---NTMMDDVIVWGTTQEHDRNLREVLSIARRMNLKLNKDKCEFSVKKLTFIG-DLISDQGVQPD PKKV

>Gulliver

-YMNVISPV-SYS-VATPLVFIKKAD-----GKL RVC GDFSTGLNKALQDHLYPLPIPEDLFTILNGCVVFSKIDFSDAYFQVEVAEESRLLLT VNTHRG-LFQYNRLPFGVKCAP-AIFQQIMDTMLADLPFS---MAYMDDIIVTSKNEKEHYAHSQKVFRRLSEYGF CMKLEKCSFFMSSIKYLG-IIIDLNGGRPNPEKV

>Fugitive

QQAGVIQTG-NYSAWAAPIVVIRKPN-----GTIRICADFSTGLNAALDEYQYPLVPEDLFAKLNGGTCFAKIDFSDAYLQVEVDDDSRGLLTINTHRG-LFQYTRLPFGIKTAP-AIFQQIMDTMLTGIPGA---AAYLDDIIVMGSTNSELSDR LHQVLNRVLEYG FQLREEKCIFFMHSIKYLG-FILDKNGRRPD PANI

>Cer1

-LNQKVIRESK-SPWSSPVVLVKK-----KDG---SIRMCIDYRKVNKVVKNN A-HPLPNIEATLQSLAGKKLYTVFDMIAGFWQIPLDEKSKEITAF AIGSE-LFEWNVLPFGLVISP-ALFQGTMEEIIGDLLGV-CA FVYVDDLLIASKDMEQHLQDVKEALTRIRKSGMKLRASKCHIAKKEVEYLG-HKVTLDGVETQEVKT

>CsRn1

-LELGIIRTSS-SHWSSPLHMPVKK-----SKGDWRPCGDYRSLNYATIPDR-YPIPHIHDFASTLCHTNIFSKLDLVRAYYHIPVAPDDIPKTAITTPFG-LFEFTRIPFGLRNAA-QTFQRFMDEVLRGLP---FVYAYLDDVLIAS TSPTEHAAHLRAVFERLSTYSIRLNIDKCLFGVTSLD FLG-HHIDSTGISPLPDR I

>Gypsy

-LKDGIIRPSR-SPYNSPTWVVDKKG T-----DAFGNPNKRLVIDFRKLNEKTIPDR-YPMPSIPMILANLGAKFFTTLDLKSGYHQIYLA EHDREKTSFSVNGG-KYEFCLRPFGLRNAS-SIFQRALDDVLREQIGK-ICYVYVDDV IIFSENESDHVRHIDTVLKCLIDANMRVSQEKTRFFKESVEYLG-FIVSKDGTKSDPEKV

>Mdg1

-IKDGIVEQSI-SEYNSPLLLVPKKS L-----PNSEEKRWRLVVDYRQINKKLLADK-FPLPRIEDILDQLGRAKYFSCLDLMSGFHQIELDERSRNITSFSTSTG-AYRYTRLPFGLKIAP-NSFQRMMLAFSGLTPS-QAFLYMDDL VVIGCSEKHMLKNLTDVFKLCRQHNLKLHPEKCTFFMKEV TYLG-HKCTDKGILPDDSKY

>Mdg3

-LENGFIRPSD-SEYASPIVLVKKK-----TGDLRMCVD FRKLNKMTMKDN-YPLPLIDDLDRMNEKT VFTKLDLKN GFFHVHVKKESIKYTSFVTPLG-QYEWLRMPFGLKNAP-SVFQRFVNKIFADMIRENKVVVYMDDILLATENINEHLET LKEIFKRLVENKLELRIDKCEFMQSSIKYLG-FIINKDGIMPNDKGI

>Oswaldo

--LLGVEYRAR-KSTEEWTVGGKVVR-----GGFQWRKRSRNATGSDPGGS-YPLPRVHHILDQLREARYITSLDLK DGYWQIPMEKSSRPLTAFTVPGKGLLQWKVMPFGLHSAP-VTFQRALDQVIGPDMMP-HAFAYLDDKIVIGRTRQEHMDNLREMFRR LRAANLRINIYKCDFFKKELIYLG-HKVTE DGIRT DPEKV

>Cyclops

-LDARMIYPISDSPWSPVHVVPKKGNTVIRNDKDELIPTKVATGWRMCIEYRRLNTATRKDH-FPLPFMDQMLERLSGQQYYCFLDGYSGYNQIAVDPADHXKTAFTCPFG-VFAYRKMSFGLCNAP-TTFQRCVQAIFADLNEK-TMEVFMDDFSVFGVSFSLCLANLKT VLERCVKTNLVLNWXKCHF MVTEGIVLG-HKVSSRGGLEVDRAKV

>Blastopia

-VEQSIVRKST-SNVASRIVVVRKK-----DGTLRVCVDYRKLNTMVLMD C-FPVPIMEEVLEKLQSAKWFTTMDLQNGFFHVAVEEASKPYTAFVTREG-LFEFNKAPFGFKNSP-AAFIRFVQFIFQELINSNIMQLYMDDIIVYAATPEECMEKTEMVLKRAAEFGLKIKWKKCNFMQRR I HFLG-HIIEGGQICPGKEKT

>Athila

-LDAGIIYPISDSTWSPVHVVPKKGVTVVKNDNDELIPTRTITGHRMCIDYRKLNAASRKDH-FPLPFIDQMLERLANHTHYCFLDGYSGFFQIPIHPNDQEKTTFTCPYG-TFAYRRMPFGLCNAP-ATFQRCMMSIFSDLIEN-VVEVFMDDFSVYGDSFASCLSNLCRVLKRCEETNLVLNWEKCHCMVRDGIVLG-HKISEKGIEVDRAKI
>Woot
-LDLGVIKREA-SPYASPMTVGKKD-----GTVRICLDARMINSKMIADC-ESPPAADELLRRFHEIRYMSTIDLRSSYWQIPLSPESRQYTAFLYNGR-SYTYQVLPFGLKTAV-GSFSRAMDVVLGTEVRE-FVVNYIDDLLVASETLNEHLEHLRQVFEKQARMTINLEKSNIQKE-KFLG-HILTINGIKADPEKI
>Ulysses
-LKLGIIEESD-SPWSNRRTTVMRP-----GKNRFCLDARKLNSVTVKDA-YPLPCIEGILRDRRDSHFISSVDLKFAFWQIEMEESRAYTAFTVPRP-LYQFRHMPFGLCNAA-QHFERLMDKVIPANLRS-NVFVYLDLLIISADFPHTLKYLELVAECLRNANLTIGMAKSKFLFRNLNYLGFILRRRTWRMDPGRV
>Tom
-LEQGLIRESN-SPYNSPTWVVPKK-P-----DASGKAKYRVVIDYRKLNEITIPDR-FPIPNMDEILGKLKGCQYFTTIDLARGFHQIEMDSESIQKTAFTSTKRG-HYEYVRMPFGLRNAP-ATFQRCMNNILRPLINK-HCLVYLDDMIIFSTSLDEHLNSLQLVFEKLSSESNLKLQLDKCEFLKKEATFLG-HIVTPDGIKPNPLKV
>TED
-LDQGIIRPSD-SAWSSPIWVVPKK-I-----DASGKQKWRLVVDFRKLNEKTIDDK-YIPNISDVLDKLGKQYFTTLDLASGFYQVEMDPQDISKTAFNVEHG-HFEFLRMPMGLKNSP-STFQRVMDNVLRGLQNN-ICLVYLDIIIVYSTSLQEHLNLERVFQRLRESNFKIQMDKSEFLKLETAYLG-HIISRDGIKPNPDKI
>Yoyo
-LEDGIIRPSR-SPYNSPVWIVDKK-P-----DSLGNKQYRLVIDYRKLNSVTIADR-YPIPEINEVLSHLGSNTFFSVIDLKSGFHQIPLKNSDIEKTAFSINNE-KYEFTRLPPFGLKNAP-SIFQRTLDDILRDYIGQ-CCYVYIDIIIFSRNEKEHSTHLKNIFTTLEKANMKVQLDKCKFFEKEVEFLG-FIVTPEGIKTNPSKI
>412
-IKDKIVEPSV-SQYNSPLLLVPKKSS-----PNSDKKKWRLVIDYRQINKKLLADK-FPLPRIDDILDQLGRAKYFSCLDLMSGFHQIELDEGSRDITSFSTSNG-SYRFTRLPFGLKIAP-NSFQRMMTIAFSGIEPS-QAFLYMDDLIVIGCSEKHMLKNLTEVFGKCREYNLKLHPEKCSFFMHEVTFLG-HKCTDKGILPDDKKY
>Sushi
-LASGIIRPSS-SPLAAGFFVFAKE-----DGGLRPCIDFRKLNNITVKNK-YPLPLMSSTFEPLTHARVFTKLDLRNAYHLVQIRKGDEWKTAFNTHLG-HFEYLVMPFGLSNAP-AVFQELVNDVLRDMINV-FVVVYLDLILFSRTMEEHHQHVRVLVLRLLLENRLFIAEKCIFHSASVGYLG-YIVEEGRVRADPAKI
>Del
-LNKGFIRGST-SPWGAHVLFDPKK-----DDSKRMCIDY-KLNSVTVKNK-YPLPRIDDLFDQLNGA-YFSKIDLRFRYHQLRIR-ADIPKTAFRTRYG-HYEFLVMPFGLTNVP-TAFMNLNMRVFREYLDK-FIVVFVDYVLIYSRTQKDHEHHLRISLQLLRNNQLYAKLSKCEFWMEKVFLG-HVVSREGIVVDPVKV
>Maggy
-LKKGFIRPSS-SSVASPVLVKKQ-----GGGLRFCVDYRALNNITVKDR-YPLPLVRETLLNLAGMKFFSKIDIVSAFNNIRIKKGEEYLTAFRTRFG-LYESLVMPFGLTGAP-ATFQRYINDSLREYLDV-FCTAYLDDILIYSRTRTEHEEHLKLVLEALRKAGLYANAACEFFVTETKFLG-LLVGVEGVKMDPEKI

B. An alignment of *Ta1-11* and other *gypsy*-like reverse transcriptase (RT) protein sequences using the ClustalW method ("aligned" format)

Ta1	-----	
Ta2	-----	
Ta3	-----SSPM-LVKK-----PYL---SYRVCIDFRMINPLS	26
Ta4	-----SPWASPLMLVRKKN-----GTYRPCVDFRRVNAV	30
Ta5	-----	
Ta6	-----SPWASPVVLVKKPN-----GTFRPCIDYRKLNSCT	30
Ta7	-----SPWASPVLVKKPN-----GTYRPCVDYRKLNACT	30
Ta8	-----SPWASPVLVKKPN-----GTYRPCVDYRKLNACT	30
Ta9	-----	
Ta10	---GILESI-EHYEWATPIVAIPKAL-----DAVRICGDFKVTVNPV	38
Ta11	-----SPYAAPVVLVVK-----PDG---KWRFCVDYRGLNKVS	30
Jule	EKMKVISKV-EKSEWASPIVTPKTD-----KTIRICGDYKVSINQC	41
Mag	LAAGVIKPV-DHSDWATPLVVVRKAD-----GGLRICADYKVTLNKV	41
SURL	ERLDVITPVDEPTDWVSSLVVMKKN-----GQLRVCLDPRD-LNRA	41
Gulliver	-YMNVISPV-SYS-VATPLVFIKKAD-----GKLRVCGDFSTGLNKA	39
Fugitive	QQAGVIQTG-NYSAWAAPIVVIRKPN-----GTIRICADFSTGLNAA	41
Cer1	-LNQKVIRESK-SPWSSPVVLVKK-----KDG---SIRMCIDYRKVNKV	40
CsRn1	-LELGIIRTSS-SHWSSPLHMPKK-----SKGDWRPCGDYRSLNYAT	41
Gypsy	-LKDGIIRPSR-SPYNSPTWVVDKKG-----DAFGNPNKRLVIDFRKLNEKT	46
Mdg1	-IKDGIVEQSI-SEYNSPLLLVPKKSL-----PNSEEKRWRLVVDYRQINKKL	46
Mdg3	-LENGFIRPSD-SEYASPIVLVKK-----TGDLRMCVDFRKLNKMT	40
Oswaldo	-LLGVEYRAR-KSTEEWTVGGKVVR-----GGFQWRKRSRATGSD	39
Cyclops	-LDARMIYPISDSPWVSPVHVVPKKGNTVIRNDKDELIPTKVATGWRMCIEYRRLNTAT	59
Blastopia	-VEQSIVRKST-SNVASIVVVRKK-----DGTLRVCVDYRKLNTMV	40
Athila	-LDAGIIYPISDSTWVSPVHVVPKKGVTVVKNDNDELIPTRTITGHRMCIDYRKLNAAS	59
Woot	-LDLGVIKREA-SPYASPMTVGKKKD-----GTVRICLDARMINSKM	40
Ulysses	-LKLGIIEESD-SPWSNRRTVVMRP-----GKNRFCLDARKLNSVT	39
Tom	-LEQGLIRESN-SPYNSPTWVVPKK-P-----DASGKAKYRVVIDYRKLNEIT	45
TED	-LDQGIIRPSD-SAWSSPIWVVPKK-I-----DASGKQKWRLVVDYRKLNEKT	45
Yoyo	-LEDGIIRPSR-SPYNSPVWIVDKK-P-----DSLGNKQYRLVIDYRKLNSVT	45
412	-IKDKIVEPSV-SQYNSPLLLVPKKSS-----PNSDKKKWRLVIDYRQINKKL	46
Sushi	-LASGIIRPSS-SPLAAGFFVFAKE-----DGGLRPCIDFRKLNNIT	40
Del	-LNKGFIRGST-SPWGAHVLFDPKK-----DDSKRMCIDY-KLNSVT	39
Maggy	-LKKGFIRPSS-SSVASPVLFVKKQ-----GGGLRFCVDYRALNNIT	40

Ta1	-----FA-MFS---	5
Ta2	-----LFA-MFS---	6
Ta3	I-DA-YPPF-LDEIL-LLRRPRYISTLELAKGY-QIPLGNRS-AITGFATSLW-LFKFRV	79
Ta4	EMDA-YPIPKITEILDRIRQAKFISTIDQSKGYGQIPLPPNSQKTTAFITPFG-LYEFKV	88
Ta5	-----LDLSKGYWQIPIEEESKSYTDFTTPIG-LYEFNT	33
Ta6	KADA-YPLPRIGYILDIVGNAKFITMLDLSKGYCQIPMEEEKSKSYTAFTTPFG-LIEFNV	88
Ta7	TVNA-YPLPRIDDLDTVGNAKFITTLDSLKGWQIPMEEGSKQYTAFTTPYG-LYEFEM	88
Ta8	TVNA-YPLPRIDDLDIVGNAKFITTLDSLKGWQIPMEEGSKQYTAFTTPYG-LYEFEM	88
Ta9	-----	
Ta10	LCTDQYPLPRSEELFAALNGGSLFTKLDSEAYLQVELDPASRKYLVINTHKG-LYRYTR	97
Ta11	IRDV-YPLPRIDDSLVDLGHAKYFSTLDFSGYWQVPVAEEDKAKTAFITHNG-LYEFNV	88
Jule	IEEKHYPLPNAEDLFATLEGGTSFSKLDLSHAYQQLELDEESEKYLVINTHKG-LYKYSR	100
Mag	LAIDRFPVPKMEDLFSNLGNGFFTKLDLSQAYNQIVLSERSSEYTVINTHRG-LFKYSR	100
SURL	IKREHYQLPSRAEITAHFAGAKYFSKLDASSGFWQIQLDDESSKLCTFITPYG-RYKFLR	100
Gulliver	LQDHLPLPIPEDLFTILNGCVVFSKIDFSDAYFQVEVAEESRLLLTVNTHRG-LFQYNR	98
Fugitive	LDEYQYPLVPEDLFAKLNGGTCFAKIDFSDAYLQVEVDDDSRGLLTINTHRG-LFQYTR	100
Cer1	KNNA-HPLPNIEATLQSLAGKKLYTVFDMIAGFWQIPLDEKSKEITAFAGSE-LFEWNV	98
CsRn1	IPDR-YPIPHIHDFASTLCHTNIFSKLDLVRAYYHIPVAPDDIPKTAITTPFG-LFEFTR	99
Gypsy	IPDR-YPMPSIPMILANLGKAKFFTTDLKSGYHQIYLAHDREKTSFSVNGG-KYEFGR	104
Mdg1	LADK-FPLPRIEDILDQLGRAKYFSCDLMSGFHQIELDERSRNITSFSTSTG-AYRYTR	104
Mdg3	MKDN-YPLPLIDDLDRMNEKTVFTKLDLKNQFFHVHVKKESIKYTSFVTPLG-QYEWLR	98
Oswaldo	PGGG-YPLPRVHHILDQLREARYITSLDLKDGYWQIPMEKSSRPLTAFTVPGKGLLQWKV	98
Cyclops	RKDH-FPLPFMDQMLERLSGQQYYCFLDGYSGYNQIAVDPADHXKTAFTCPFG-VFAYRK	117
Blastopia	LMDC-FPVPIMEEVLEKLQSAKWFTTMDLQNGFFHVAVEEASKPYTAFVTREG-LFEFNR	98
Athila	RKDH-FPLPFIDQMLERLANHHTHYCFLDGYSGFFQIPIHPNDQEKTFTCPYG-TFAYRR	117
Woot	IADC-ESPPAADELLRRFHEIRYMSTIDLRSSYWQIPLSPESRQYTAFLYNGR-SYTYQV	98
Ulysses	VKDA-YPLPCIEGILRDRRDSHFISVDLKFQFWQIEMEESRAYTAFTVPRP-LYQFRH	97
Tom	IPDR-FPIPNMDEILGKLKGCQYFTTIDLARGFHQIEMDSESIQKTAFTSTKRH-HYEVVR	103
TED	IDDK-YPIPNISDVLKLGKGCQYFTTDLASGFYQVEMDPQDISKTAFTNVEHG-HFEFLR	103
Yoyo	IADR-YPIPEINEVLSHLGKSNFTFVIDLKSQFHQIPLKNSDIEKTAFTSINNE-KYEFTR	103
412	LADK-FPLPRIDDLQLGRAKYFSCDLMSGFHQIELDEGSRDITSFSTSNQ-SYRFTR	104
Sushi	VKNK-YPLPLMSSTFEPLTHARVFTKDLRNAYHLVQIRKGDEWKTAFTNTHLG-HFEYLV	98
Del	VKNK-YPLPRIDDLFDQLNGA-YFSKIDLRFYHQLRIR-ADIPKTAFTTRYG-HYEFVR	95
Maggy	VKDR-YPLPLVRETLNNLAGMKFFSKIDIVSAFNNIRIKKGEEYLTAFRTFRG-LYESLV	98

Ta1	MPFGLHSAP-ATFQRLMNAVL-KDLQG-VANV-LDDTIVYSASWKEHLQHLGTGIRSIAT	61
Ta2	MPFGLHCAP-ATFQRLMNAVL-KDLQG-VASVYLDDTIVYSANWKEHLQHLGTGIRSIAT	63
Ta3	MPFDMHSAP-ATFQR-----	93
Ta4	MPIGLHSAP-ATFQRLMDAVL-KDLPG-VASVYLDDIMFYSANWKEHLQHLELVFDR-RQ	144
Ta5	MPFGLQNAP-VTFKSLVNSLF-AEYSE-YVAVCLDGIVIFDQTWEQHLSHIANVFKILEA	90
Ta6	MPFGLHNAP-GTFQQLVNTLF-GKHYE-YLAVYMDDIIIFDTSWEDHSKHLEIIFKVLED	145
Ta7	MPFGLHNAP-ATFQSLVNSLF-AHISD-FVAVYLDDIVV-----	124
Ta8	MPFGLHNAP-ATFQSLVNSLF-AHISD-FVAVYLDDIVVYDTTWEDHLRHLKTVFQILEA	145
Ta9	---GIASAP-AIFQQLMDTMLQGIPGT---ACYLDDIIVTGKTKAEHPQSLKQVLDGINT	53
Ta10	LPFGIASAPPTIFQQLMDTMLQGIPGT---VCYLDDIIVTGKTTQEHLQSLQQVLDRIHT	154
Ta11	MPFGLTNAP-ATFQRLMNLTLTGLCWI-NCIVYIDDVIVYSNTFNMHLQHLEEVFKRVDR	146
Jule	LSYGVSSAP-AIFQSVMDQILQGMDHV---TCFLDDILITASSEKEHLQRLEEVLTRLEK	156
Mag	LVIYGLASSP-GIFQKLMVMNMFKNVPNV---VVFYDDILIRNQDLDSHLKSIKEVLDILER	156
SURL	LPFGICSAP-EVYHKIVHQMFHIPGV---NTMMDDVIVWGTTQEQHDNRLREVLSIARR	156
Gulliver	LPFGVKCAP-AIFQQIMDTMLADLPFS---MAYMDDIIVTSKNEKEHYAHSQKVFRRLSE	154
Fugitive	LPFGIKTAP-AIFQQIMDTMLTGIPGA---AAYLDDIIVMGSTNSELSDRLHQVLNRVLE	156
Cer1	LPFGLVISP-ALFQGTMEEIIGDLLGV-CAFVYVDDLLIASKDMEQHLQDVKEALTRIRK	156
CsRn1	IPFGLRNAA-QTFQRFMDEVLRGLP---FVYAYLDDVLIASTSPTEHAAHLRAVFERLST	155
Gypsy	LPFGLRNAS-SIFQRALDDVLRQIGK-ICYVYVDDVIIFSENESDHVRHIDTVLKCLID	162
Mdg1	LPFGLKIAP-NSFQRMMTLAFSGLTPS-QAFLYMDDLVIIGCSEKHMLKNLTDVFKLCRQ	162
Mdg3	MPFGLKNAP-SVFQRFVNKIFADMIRENKVVVYMDDILLATENINEHLETKEIFKRLVE	157
Osvaldo	MPFGLHSAP-VTFQRALDQVIGPDMMP-HAFAYLDDKIVIGRTRQEHMDNLREMFRRLRA	156
Cyclops	MSFGLCNAP-TTFQRCVQAIFADLNEK-TMEVFMDDFSVFGVSFSLCLANLKTVLERCVK	175
Blastopia	APFGFKNSP-AAFIRFVQFIFQELINSNIMQLYMDDIIVYAATPEECMEKTEMVLKRAAE	157
Athila	MPFGLCNAP-ATFQRCMMSIFSDLIEN-VVEVFMDDFSVYGDSFASCLSNLCRVLKRCEE	175
Woot	LPFGLKTAV-GSFSRAMDVVLGTEVRE-FVVNYIDDLLVASETLNEHLEHLRQVFEKCLKQ	156
Ulysses	MPFGLCNAA-QHFERLMDKVIPANLRS-NVFVYLDDLLIISADFPTHLKYLELVAECLRN	155
Tom	MPFGLRNAP-ATFQRCMNNILRPLINK-HCLVYLDDMIIFSTSLDEHLNSLQLVFEKLSE	161
TED	MPMGLKNSP-STFQRVMDNVLRGLQNN-ICLVYLDDIIVYSTSLQEHLNLERVFQRLRE	161
Yoyo	LPFGLKNAP-SIFQRTLDDILRDYIGQ-CCYVYIDDDIIFSRNEKEHSTHLKNIFTTLEK	161
412	LPFGLKIAP-NSFQRMMTIAFSGIEPS-QAFLYMDDLIVIGCSEKHMLKNLTEVFGKCRE	162
Sushi	MPFGLSNAP-AVFQELVNDVLRDMINV-FVVVYLDDILIFSRTMEEHHQHVRVLVLQRLLE	156
Del	MPFGLTNVP-TAFMNLMNRFREYLDK-FIVVFVDYVLIYSRTQKDHEHHLRISLQLLRN	153
Maggy	MPFGLTGAP-ATFQRYINDSLREYLDV-FCTAYLDDILIYSRTRTEHEEHLKLVLEALRK	156

.. :

Ta1	IRIKC-RIKVQFRKQ-----	75
Ta2	IWIKCYRRKAQFRKQ-----	78
Ta3	-----	
Ta4	YGFSVKEEKC�FACNIVSYLG-HTI-----	168
Ta5	AKLTL-PSKCIFAEGTVNYLG-HQIG--SGKLKP---	120
Ta6	ANLKLQPSKCTFAKGTVTYLG-HQIG--SGLVKP---	176
Ta7	-----	
Ta8	ANLTLQPAKCTFAKGTVTYLG-HQIG--SGVVQP---	176
Ta9	SGFSVQLNKCSFMQGKIKYLG-HVLDKNGIHMSQKKV	89
Ta10	YGFRVKLNKCSFMQKRIEYLG-HVIDKDGVMSPRKV	190
Ta11	ANLKLKLAKCIFAAREVKFLG-HIISADGILPNPDKI	182
Jule	HGLRVKLAKCRFLQSSVEYLG-HRIDKDGHPMEEKV	192
Mag	YGLKIKRSKCEFMVTEVRYLG-FIIDQNGVRVDPEKV	192
SURL	MNLKLNKDKCEFSVKKLTFIG-DLISDQGVQPDPKKV	192
Gulliver	YGFCMKLEKCSFFMSSIKYLG-IIIDLNGGRPNDPEKV	190
Fugitive	YGFQLREEKCIFFMHSIKYLG-FILDKNGRRPDANI	192
Cer1	SGMKLRASKCHIAKKEVEYLG-HKVTLDGVETQEVKT	192
CsRn1	YSIRLNIDKCLFGVTSLDFLG-HHIDSTGISPLPDR	191
Gypsy	ANMRVSQEKTFFKESVEYLG-FIVSKDGTKSDPEKV	198
Mdg1	HNLKLHPEKCTFFMKEVTYLG-HKCTDKGILPDDSKY	198
Mdg3	NKLELRIDKCEFMQSSIKYLG-FIINKDGIMPNDKGI	193
Osvaldo	ANLRINIYKCDFFKKELIYLG-HKVTEGIRTDPEKV	192
Cyclops	TNLVLNWXXKCHFMVTEGIVLG-HKVSSRGGLEVDRAKV	211
Blastopia	FGLKIKWKKCNFMQRRIHFLG-HIIEGGQICPGKEKT	193
Athila	TNLVLNWEKCHCMVRDGIVLG-HKISEKGIEVDRAKI	211
Woot	ARMTINLEKSNFIQKE-KFLG-HILTINGIKADPEKI	191
Ulysses	ANLTIGMAKSKFLFRNLNYLGFIQLRRRTWRMDPGRV	192
Tom	SNLKLQLDKCEFLKKEATFLG-HIVTPDGIKPNDPKV	197
TED	SNFKIQMDKSEFLKLETAYLG-HIISRDGIKPNDPKI	197
Yoyo	ANMKVQLDKCKFFEKEVEFLG-FIVTPEGIKTNPSKI	197
412	YNLKLHPEKCSFFMHEVTFLG-HKCTDKGILPDDKKY	198
Sushi	NRLFIAEKCIFHSASVGYLEG-YIVEEGRVRADPAKI	192
Del	NQLYAKLSKCEFWMEKVKFLG-HVVSREGIVVDPVKV	189
Maggy	AGLYANAAKCEFFVTETKFLG-LLVGVEGVKMDPEKI	192