

FIGURE 1

LNFRAPPVIPNVPFLWAWNAPSEFCLGKFDEPLDMSLFSFIGSPRINATGQGVTIFYVDR 60
LGYYPIIDSIITGVTVNGGIPQKISLQDHLDKAKKDIITFYMPVDNLGMAVIDWEWRPTWA 120
RNWKP KD VYKNRSIELVQQQNVQLSLTEATEKAKQEF EKAGKDFLVETIKLGKLLRPNHL 180
WGYLFPDCYNHHYKKPGYNGSCFNVEIKRND DLSWLWNNESTALYPSIYLN TQQSPVAAT 240
LYVRNRVREAIRVSKI PDAKSPLPVFA YTRI VFTDQVLKFLSQDEL VYTFGETVALGASG 300
IVIWG TLSIMRSMKSCLLLDNYMETILNPYI INVTLAAKMCSQVLCQEQGVCIRKNWNSS 360
DYLHLNPDNF AIQLEKGGKFTVRGKPTLEDLEQFSEKFYCSYSTLSCKEKADV KDTDAV 420
DVCIADGVCIDAF LKPPMETEEPQIFYNASPS T L SATMFIVSILFLIISSVASL 474

FIGURE 2A

```

SEQIDNO_3
chimp_SEQIDNO_10_
LNFRAAPPVIPNVPFLWAWNAPSEFCLGKFDEPLDMSLFSFIGSPRINATGQGVTFIFYVDR 60
LNFRAAPPVIPNVPFLWAWNAPSEFCLGKFDEPLDMSLFSFIGSPRINVTGQDVTFIFYVDR 60
*****
LGYYPYIDSIITGVTVNGGIPQKISLQDHLDDKAKKDI TFYMPVDNLGMAVIDWEEWRPTWA 120
LGYYPYIDSIITGVTVNGGIPQKISLQDHLDDKAKKDI TFYMPVDNLGMAVIDWEEWRPTWA 120
*****
RNWPKPDVYKNRSIELVQQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGKLLRPNHL 180
RNWPKPDVYKNRSIELVQQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGKLLRPNHL 180
*****
WGYLFPDCCYNHHYKKPGYNGSCFNVEIKRNDLDSWLWNNESTALYPSIYLNTOQSPVAAT 240
WGYLFPDCCYNHHYKKPGYNGSCFNVEIKRNDLDSWLWNNESTALYPSIYLNTOQSPVAAT 240
*****
LYVRNRVREAIRVSKI PDAKSPLPVFAYTRIVFTDQVLKFLSQDELVYTFGETVALGASG 300
LYVRNRVQEAIRVSKI PDAKSPLPVFAYTRIVFTDQVLKFLSQDELVYTFGETVALGASG 300
*****;*****
IWIWGTLSIMRSMKSCLLLDNYMETILNPYI INVTLA AKMCSQVLCQEQGVCIRKNWNSS 360
IWIWGTLSIMRSMKSCLLLDNYMETILNPYI INVTLA AKMCSQVLCQEQGVCIRKNWNSS 360
*****
DYLHLNPDNFPAIQLEKGGKFTVRGKPTLEDLEQFSEKFCYCSTLSCKEKADVKTDAV 420
DYLHLNPDNFPAIQLEKGGKFTVRGKPTLEDLEQFSEKFCYCSTLSCKEKADVKTDAV 420
*****
DVCIADGVGCIDAF LKPPMETEEPQIFY----- 447
DVCIADGVGCIDAF LKPPMETEESQIFYNASPTLSATMFIVSILFLIISSVASL 474
*****

```

FIGURE 2B

```

SEQIDNO_3
Rhesus_SEQIDNO_12_
LNFRAPIV PNV PFLWAWNAPSEFC LGKFDPLDMSLFSFIGSPRINATGQGVTFIFYVDR 60
LNFRAPII PNV PFLWAWNAPSEFC LGKFNPLDMSLFTLMGSPRINITGQGVTFIFYVDR 60
*****:*****:*****:*****:***** *****
LGYYPYIDSIITGVTVNGGIPQKISLQDHLDDKAKKDI TFYMPVDNLGMAVIDWEEWRPTWA 120
LGYYPYIDLTTGVTVHG GIPQKVSLQDHLDDKSKQDILFYMPVDNLGMAVIDWEEWRPTWA 120
***** *****:*****:***** *****
RNWPKDVYKNRSIELVQQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGKLLRPNHL 180
RNWPKDVYKNRSIELVQQQNVQLSLPQATDKAKQEFKAGKDFMLETIKLGRSLRPNHL 180
***** *****:*****:***** *****
WGYLFPDCYNHHYKPGYNGSCFNVEIKRNDLDSWLWNNESTALYPSIYLNTOQSPVAAT 240
WGYLFPDCYNHHYKPGYNGSCFDDVEIKRNDLDSWLWNNESTALYPSIYLNTOQSVVVAT 240
***** *****:*****:***** *****
LYVRNRVREAIRVSKI PDAKSPLPVFA YTRIVFTDQVLKFLSQDELVYTFGETVALGASG 300
LYVRNRVREAIRVSKI PDAKNPLPVH VYARLVFTDQVLKFLSREELVSTLGETVALGASG 300
***** *****:*****:***** *****
IVIWGTL SIMRSMKSCILLDN YMETILNPYI INVTLAAKMCSQVLCQEQGVCIRKNWNSS 360
IVIWGSL SITRSMKSCILLD TYMETILNPYI INVTLAAKMCSQVLCQEQGVCIRKDNSS 360
***** *****:*****:***** *****
DYLHLNPDNFAIQLEKGGKFTVRGKPTLEDLEQFSEKFCYCSCYSTLSCKEKADVKTDAV 420
DYLHLNPDNFDIRLEKGGKFTVHGKPTVEDLEEFSEKFCYCSCYTNLSCKEKADVKTDAV 420
***** *****:*****:***** *****
DVCIADGV CIDAFLKPPMETE-EPQIFY----- 447
DVCIADGV CIDA SLKPPVETEGSPPIFYNTSSSTVSTTMFIWRLEVDQGISRIGFF 477
***** *****:***** *****

```

FIGURE 2C

SEQIDNO_3	LNFRAPPVIPNVPFLWAWNAPSEFCGLGFDEPLDMSLSFSGSPRINATGQGVTIFYVDR	60
Cyno_SEQIDNO_14_	LNFRAPPVIPNVPFLWAWNAPSEFCGLGFNEPLDMSLSFTLMGSPRINVTGQGVTFIFYVDR	60
	*****:*****:*****:*****:*****:*****:*****	
SEQIDNO_3	LGYYPYIDSTGTGTVNGGIPQKISLQDHLDKAKKDIIFYMPVDNLGMAVIDWEEWRPTWA	120
Cyno_SEQIDNO_14_	LGYYPYIDLTGTGTVHGGIPQKVSLQDHLDKSKQDILFYMPVDNLGMAVIDWEEWRPTWA	120
	*****:*****:*****:*****:*****:*****:*****	
SEQIDNO_3	RNWPKDVKYKNRSIELVQQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGKLLRPNHL	180
Cyno_SEQIDNO_14_	RNWPKDVKYKNRSIELVQQQNVQLSLPQATDKAKQEFKAGKDFMLETIKGRSLRPNHL	180
	*****:*****:*****:*****:*****:*****:*****	
SEQIDNO_3	WGYLFPDCYNHHYKKPGYNGSCFNVEIKRNDLDSLWNNESTALYPSIYLNNTQQSPVAAT	240
Cyno_SEQIDNO_14_	WGYLFPDCYNHHYRKPGEYNGSCFEDVEIKRNDLDSLWNNESTALYPSIYLNNTQQSVVAT	240
	*****:*****:*****:*****:*****:*****:*****	
SEQIDNO_3	LYVRNRVREAIRVSKIIPDAKSPLPVFAYTRIVFTDQVLKFLSQDELVYTFGETVALGASG	300
Cyno_SEQIDNO_14_	LYVRNRVREAIRVSKIIPDAKNPLPVFVYARLVFTDQVLKFLSREELVSTLGETVALGASG	300
	*****:*****:*****:*****:*****:*****:*****	
SEQIDNO_3	IVIWGTLSIMRSMKSCLLLDNYMETILNPYIINVTLAAKMCSQVLCQEQGVCIKKNWNSS	360
Cyno_SEQIDNO_14_	IVIWGSLSI TRSMKSCLLLD TYMETILNPYIINVTLAAKMCSQVLCQEQGVCIKKNWNSS	360
	*****:*****:*****:*****:*****:*****:*****	
SEQIDNO_3	DYHLNPDNFAIQLEKGGKFTVRGKPTLEEDLEQFSEKFCYCSYSTLSCKEKADVKTDAV	420
Cyno_SEQIDNO_14_	DYHLNPDNFDIRLEKGGKFTVHGKPTVEEDLEEFSEKFCYCSYTNLSCKEKADVKTDAV	420
	*****:*****:*****:*****:*****:*****:*****	
SEQIDNO_3	DVCIADGVCIDAFLKPPMETE-EPQIFY----- 447	
Cyno_SEQIDNO_14_	DVCIADGVCIDASLKPPEVETEGSPPIFYNTSSSTVSTTMFIVNILFLIISVASL 475	
	*****:*****:*****:*****:*****:*****:*****	

FIGURE 2D

SEQIDNO_3	LNFRAPPVIPNVPFLWAWNAPSEFCIG--KFDEPLDMSLFSFIGSPRINATGQGVITIFYVD	59
bovine_SEQIDNO_16_	LDFRAPPLISNTSFLWAWNAPVERCVNRRFQLPPDLRLFSVKGSPQKSATGQFITLIFYAD	60
	*:***** * *: * *: * *: * *: * *: * *: * *: *	
SEQIDNO_3	RLGYYPYIDSIITGVTVNGGIPQKISLQDHLDKAKKDI TFYMPVDNLGMAVIDWEEWRPTW	119
bovine_SEQIDNO_16_	RLGYPHIDEKTGKTGTFGGIPQLGNLKSHMEKAKNDIAYIIPNDVGLAVIDWENWRPTW	120
	*****:*. *	
SEQIDNO_3	ARNWKPKDVYKNRSIELVQQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGKLLRPNH	179
bovine_SEQIDNO_16_	ARNWKPKDVYRDESVELVLQKNPQLSFPEASKIAKVDFETAGKSFMQETLKLGLLRPNH	180
	*****:*. *	
SEQIDNO_3	LWGYYLFPDCYNHHYKKPGYNGSCFNVEIKRNDLDSLWNNESTALYPSIYLT-QQSPVA	238
bovine_SEQIDNO_16_	LWGYYLFPDCYNHNHNQPTYNGNCPDVEKRRNDDLEWLWKESTALFPSVYLNI RLKSTQN	240
	*****:*. *	
SEQIDNO_3	ATLYVRNRVREAIRVSKI PDAKSPLPVFA YTRIVFTDQVLKFLSQDELVYTFGETVALGA	298
bovine_SEQIDNO_16_	AALYVRNRVQEAIRLSKIASVESPLPVFVYAREPVFTDGSSTYLSQGLVNSVGEIVSLGA	300
	*:*****:*. *	
SEQIDNO_3	SGIVIWGTLSIMRSMKSCLLLDNYMETILNPYI INVTLAAKMCSQVLCQEQGVCI RKNWN	358
bovine_SEQIDNO_16_	SGIIMWGSNLNLSMQSCMNLGTYLNTTLNPYI INVTLAAKMCSQVLCCHNEGVCIRKHN	360
	*****:*. *	
SEQIDNO_3	SSDYHLNPDNFAIQLEKGGKFTVRGKPTLEDLEQFSEKFYCSCYSTLSCKEKADV KDTD	418
bovine_SEQIDNO_16_	SSDYHLNPMNFAIQTGEGGKYTVPGTVTLEDLQKFSDTFYCSCYANIHCKKRVDIKNVH	420
	*****:*. *	
SEQIDNO_3	AVDVCIADGVCIDAF LKP -----	436
bovine_SEQIDNO_16_	SVNVCM AEDICIDSPVKL QPSDHSSSQEASTTTFSSISPSTTTATVSPCTPEKHSPECLK	480
	:*:*:*:*:*:*:*:*:*:*:*:	
SEQIDNO_3	-----PMEETEEPQIFY	447
bovine_SEQIDNO_16_	VRCSEVIPNVTQACQSVKLNISYQSPIQNIKNQTTY	518
	::*:*:*:	

FIGURE 2G

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SEQIDNO_3
Rabbit_SEQIDNO_24_
INFRAPPVIPNVPFLLWAWNAPSEFCGLKDFEPLDMSLFSFIGSPRINATGQGVTIFYVDR 60
ANFRAPPVIPNVPFLLWAWNAPTEFCGLKSGEPLDMSLFSLFGSPRKNKTGGITIFYVDR 60
*****:*****.*****.*****.*****.*****.*****.*****
LGYPYIDSTTGTVTVNGGIPQKISLQDHLDKAKKDITFYMPVDNLGMAVIDWEEWRPTWA 120
LGYPYIDPHTGAIVHGRIPLGLQQLTKLRQELIYYMPKDNVGLAVIDWEEWLPTWL 120
*****.***.***.***.***.***.***.***.***.***.***.***.***.***
RNWKPDKVYKNRSIELVQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGLLRPNHL 180
RNWKPDKDIYRIKSIELVKSQHPQYNHSYATEKAKRDFEKAGKDFMEETLKLGRLLRPNHL 180
*****:***.*****:***.***.*****:*****:*****:*****:*****
WGYLFPDCCYNHHYKKP-GYNGSCFNVEIKRNDLDSWLWNESTALYPSIYLNTOQ--SP 236
WGYLFPDCCYNHHYDKPNLYKGCDFIEKKRNDLDSWLWKESTALFPSVYLTSRARSATA 240
*****:*****.***.*****:***.*****:*****:*****:*****.:.
VAATLYVRNRVREAIRVSKIPDAKSPVPFAYTRIVFTDQVLKFLSQDELVYTFGETVAL 296
LSKLYVVRNRVHEAIRVSKIPDDKSPLPNFVYTRIVFTDQIFQFLSHHDLVYTTIGEIVAL 300
:; *****:*****.*****.*****.*****.*****.*****.*****
GASGIVIWGTLSIMRSMKSCLLLDNYMETILNPYIINVTLAAKMCQVLCQEQGVCIKRN 356
GASGIVVWGSQSLARSMKSCSLHLDNYMKTILNPYLINVTLAAKMCNQVLCQEQGVCTRKN 360
*****:***.***.*****.*****.*****:*****.*****.*****.***
WNSSDYLHLNPDNFAIQLEKGGKFTVRGKPTLEDLEQFSEKFYCSYSTLSCKEKADVVD 416
WNPNDYLHLNPGNFAIQLGSNNGTYKVDGKPTLTLDLEQFSKNFQCSYTNLNCERTDMNN 420
**..*****.*****.***.***.*****.*****:***.*****.***.***:
TDAVDVCIADGVCIDAFKPPMETEEPQ----- 444
VRFTVNVCAVENVCIDTNVGPQAVTYAPKEKKDVAHILSNSTTSINSSTTMSLPFPRKHVSG 480
.:***.***.***.***.***.***.***.***.***.***.***.***.***.***
-----IFY----- 447
CLLVLCMYSQYLNICYRLVAIGIQHGYLK 510
* *

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FIGURE 21

SEQIDNO_3	LNFRAPPVIPNVPFILWAWNAPSEFCIGKFFDEPLDMSLFSFIGSPRINATGQGVTIFYVDR	60
FOX	QEFRAPPFIPNVSFLWGNAPTCLAKRPNVQLDLNLFSLIGSPLKTVVGQGLAIFYADR	60
	:*****.*****:*	
SEQIDNO_3	LGYYPIIDSIITGVTVNGGIPQKISLQDHLDKAKKDIITFYMPVDNLGMAVIDWEEWRPTWA	120
FOX	LGYYPHINKTITGKHVNGGIPQLGSLKKHLDKAKKDI SHYIETDSMGLAVIDWDSWRPNWA	120
	*****:.*.*.*.*.*.*.*.*.*:*:*:*:*:*:*:*:*:*:*:*:*:*	
SEQIDNO_3	RNWKPKDVYKNRSIELVQQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGLLRPNHL	180
FOX	RNWRPKHIYKEQSIDLAAQQQHIHLNLTEVTQIAQADFKAARCFMQETTLKLGKFLRPNYL	180
	::***:***:***:***:***:***:***:***:***:***:***:***:***	
SEQIDNO_3	WGYLFPDCYNHHYKKPGYNGSCFNVEIKRNDLWSLWNNESTALYPSIYLNTOQ-SPVAA	239
FOX	WGYLYPDCYNHYKNPNYNGSCYDIEERRNDEIDWLWKESTALFPSIYLSKLSKPFT	240
	::***:***:***:***:***:***:***:***:***:***:***:***:***	
SEQIDNO_3	TLYVRNRVREAIRVSKIPDAKSPLPVFAYTRIVFTDQVLKFLSQDELVYTFGETVALGAS	299
FOX	ALYVRNRVLEAIRVSKVKDIKHPLPFVYARPVFTDVLTLTYLTEDDLVNTIGESVSLGVS	300
	:*****.*****:* *	
SEQIDNO_3	GIVIWGTLSIMRSMKSCLLLDNYMETILNPYIINVTLAAKMCSQVLCQEQGVCIRKNWNS	359
FOX	GIVMWGSLNLTENVQICTELDTYIKNKLNPYIINVTLAAKMCSQVLCQDEGVVICIRKHWNS	360
	::***:***:***:***:***:***:***:***:***:***:***:***:***	
SEQIDNO_3	SDYLHLNPDNFAIQLEKGGKFTVRGKPTLEDLEQFSEKFCYCYSYTLSCKEKADVKTDA	419
FOX	NDYLHLNPNVNFATQLERSGRYTVQGKPTLEDLQQFSKKFYCACYANTHCRERVDMDTIHT	420
	.*****.*****:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*	
SEQIDNO_3	VDVCIADGVCIDAFKPP-----METEEPQIFY-----	447
FOX	IKVCVGEDVCIDVYLNLPVSGHLPVWKGKYVTSSNIFSVMPPTATGPPCVPGRDLNRCLKA	480
	:.*	
SEQIDNO_3	-----	
FOX	RFIVEDNSKTTQTGYQSIYIKNKKQ 505	

FIGURE 2J

SEQIDNO_3	LNFRAPPVIPNVPFLWAWNAPSEFCLGKFEPLDMSLFSFIGSPRINATGQGVTFYVDR	60
GIBBON_SEQIDNO_857	LNFRAPPVIPNVPFLWAWNAPSEFCLGKFEPLDMSLFSLTGSPRINVTGQGVTFYVDR	60
	*****; *****	
SEQIDNO_3	LGYPYIDSTTGVTNNGGIPQKISLQDHLDKAKKDITFYMPVDNLGMAVIDWEEWRPTWA	120
GIBBON_SEQIDNO_857	LGYPYIDSTTGVTNNGGIPQKISLQDHLDKAKQDITFYMPVDNLGMAVIDWEEWRPTWA	120
	*****; *****	
SEQIDNO_3	RNWKPKDVYKNRSIELVQQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGKLLRPNHL	180
GIBBON_SEQIDNO_857	RNWKPKDVYKNRSIELVQQQNVQLSLAEATEKAKQEFKAGKDFMVETIKLGKLLRPNHL	180
	*****; *****	
SEQIDNO_3	WGYLFPDCYNHHYKKPGYNGSCFNVEIKRNDLDSLWNNESTALYPSIYLTQQSPVAAT	240
GIBBON_SEQIDNO_857	WGYLFPDCYNHHYKKPGYNGSCFNVEIKRNDLDSLWNNESTALYPSIYLTQQSPVAAT	240

SEQIDNO_3	LYVRNRVREAIRVSKIPDAKSPLPVFAYTRIVFTDQVLKFLSQDELVYTFGETVALGASG	300
GIBBON_SEQIDNO_857	LYVRNRVREAIRVSKIPDAKSPLPVFVYARIVFTDQVLKFLSRDELVYTLGETVALGASG	300
	*****; *****; *****; *****	
SEQIDNO_3	IVIWGTLSIMRSMKSCLLLDNYMETILNPYIINVTLAAKMCSQVLCQEQGVCIKKNWNSS	360
GIBBON_SEQIDNO_857	IVIWGSLSVIRSMKSCLLLDNYMETILNPYIINVTLAAKMCSQVLCQEQGVCIKKNWNSS	360
	*****; *****; *****; *****	
SEQIDNO_3	DYHLNPDNFQAIQLEKGGKFTVRGKPTLEQFSEKFYCSYSTLSCKEKADVKTDAV	420
GIBBON_SEQIDNO_857	DYHLNPDNFQAIQLEKGGKFTVRGKPTPEQFSEKFYCSYSTLSCKEKADVKTDAV	420

SEQIDNO_3	DVCIADGVCIDAFLLKPPMETEEPQIFY----- 447	
GIBBON_SEQIDNO_857	DVCIADGVCIDAFLLKPPKETEESEQIFYNASPSTLSATMFVLSILFISSVSL 474	

FIGURE 2K

SEQIDNO_3
MARMOSSET_SEQIDNO_859

SEQIDNO_3
MARMOSSET_SEQIDNO_859

SEQIDNO_3
MARMOSSET_SEQIDNO_859

SEQIDNO_3
MARMOSSET_SEQIDNO_859

SEQIDNO_3
MARMOSSET_SEQIDNO_859

SEQIDNO_3
MARMOSSET_SEQIDNO_859

SEQIDNO_3
MARMOSSET_SEQIDNO_859

LNFRAPPVIPNVPFLWAWNAPSEFCLGKFFDEPLDMSLFSFIGSPRINATGQGVTFYVDR 60
LNFRAPPPIIPNVPFLWAWNAPSEFCLGKFFDEPLDMSLFSFIGSPRINVTGQGVTFYVDR 60
*****:*****:*****:*****:*****:*****
LGYYPYIDSTTGVTVNGGIPQKISLQDHLDKAKKDIIFYMPVDNLGMAVIDWEEWRPTWA 120
LGYYPYIDPTTGAVVNGGIPQKIALQDHLDKVRKDIIFYMPVDNLGMGVIDWEEWRPTWA 120
***** **..*****:*****:*** *****:*****
RNWKPKDVYKNRSIELVQQQNVQLSLTEATEKAKQEFKAGKDFLVETIKLGKLLRPNHL 180
RNWKPKDIYKNKSIEMVQQQRNVQLNLITQATDIAKQEFKAAKDFMLETIKLGKALRPNHL 180
*****:*****:*****:***: *****:*****
WGYLFPDCYNHHYKKPGYNGSCFNVEIKRNDLDSLWNESTALYPSIYLNTOQSPVAAT 240
WGYLFPDCYNHHYKKPDYNGSCFNIEIKRNDLDSLWNESTALYPSIYLNTOQSSAVAAM 240
*****:*****:*****:*****:*****:*****
LYVRNRVREAIRVSKIIPDAKSPLPVFAYTRJLVFTDQVLKFLSQDELVYTFGETVALGASG 300
LYVRNRVQEAIRVSKTPNANSPLPVFVYARLVFTDQVLRFLSQDELVYTLGETVALGASG 300
*****:***** *:*****:***: *****:*****:*****
IVIWGTLSIMRSMKSCLLLDNYMETILNPYIINVTLAAKMCQVLCQEQGVCIRKNWNSS 360
IVIWGSLSIMRSMKSCLLLDTYMETVNLNPYIINTTLAAKMCQVLCQEQGVCIRKDNSS 360
*****:*****:*****:*****:*****:*****:*****
DYLHLNPDNFAIQLEKGGKFTVRGKPTLEHLEQFSEKFYCSYTLSCKEKADVKTDAV 420
DYLHLNPDNFAIETEKGGKFTVRGKPTYEHLEQFSEKFYCSYTLSCVKADVKTDAV 420
*****:*****:*****:*****:*****:*****:*****
DVCIADGVCIDAFLLKPPMETEEP-QIFY----- 447
DVCIADGVCIDASLPPKETEESSQIFYNPSSSTPSAAIFVAILFFISCVVSL 474
*****:***** ***** *****

[illegible]