

Supplementary file 8. Multiple sequence alignment of full length vitellogenin receptor protein sequences of selected insects from each order. Important domains are labeled and highlighted.

1 2 3 4 5 6 7 8 9
Variable Average Conserved

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Bemisia tabaci Asia_1
T1E9W2 Anopheles aquasalis
P98163 Drosophila melanogaster
B4Q2Q9 Drosophila yakuba
B4IGA9 Drosophila sechellia
K4MUW4 Actias selene
Q1T728 Rhyarobia maderae
O76952 Aedes aegypti
Q6X0I2 Solenopsis invicta
ADE34166.1 Nilaparvata lugens
D5KXW4 Nilaparvata lugens
BAC02725 Periplaneta americana
ADM34986.1_1_B tabaci_B
CAJ19121 Blattella germanica
H2CLV8 Antheraea pernyi
XP_008180459 Acyrthosiphon pisum
UPI000252AABD Apis florea
UPI0001758603 Tribolium castaneum
T1KD20 Tetranychus urticae
UPI0002063B8E Apis mellifera
E2FLQ4 Bombyx mori

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UPI0002063B8E Apis mellifera
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```

LDLa

Bemisia tabaci Asia 1
 T1E9W2_Anopheles_aquasalis
 P98163_Drosophila_melanogaster
 B4Q2Q9_Drosophila_yakuba
 B4IGA9_Drosophila_sechellia
 K4MUW4_Actias_selene
 Q1T728_Rhyparobia_maderae
 O76952_Aedes_aegypti
 Q6X0I2_Solenopsis_invicta
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 BAC02725_Periplaneta_americana
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 CAJ19121_Blattella_germanica
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 UPI0001758603_Tribolium_castaneum
 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

```

FECTNHR--CISMDLRCDGDDDCNDGSDHGCNVD-----KSKNETC
-----LDLMCDGIDHCRDGSDE-----
FPCAQPHGACLAALMLCNGIDNCPGGEDELNCPVRPGFRFGDTAHRMRSC
FPCAQPHGACLAALMLCNGIDNCPGGEDELNCPVRPGFRFGDTAHRMRSC
FPCAQPHGACLAALMLCNGIDNCPGGEDELNCPVRPGFRFGDTAHRMRSC
FPCMSGG--CIQSSQYCDGKVDGDDGTDENYCLDH-----KPDAPFCN
FRCRTGR--CISSSLRCDTDDDCGDWSDEEDCFPT-----VSEPARC
YRCKHDK-S-CISATFLCDKHDDCPLGDDEBNCENF-----EVPHVPC
FQCNSGE--CIPVDKCKDYIDHCIDGSDHDFECDH-----LDEKSFITC
FECGNNGN--CIDGDMVCNDVVRDCLDGSDEDEQLCH-TQHQEHHINYPEC
FECGNNGN--CIDGDMVCNDVVRDCLDGSDEDEQLCH-TQHQEHHINYPEC
FRCHNGR--CTSKSFHCDGVDDCGGWSDEEDCYEM-----ESKPANC
FECTNHR--CISMDLRCDGDDDCNDGSDHGCNVD-----KSKNETC
FRCRNGR--CISSGMRCDGDDDCGDWSDEDDCHIE-----HVPKNC
FPCMSGG--CIQSSQYCDGKVDGDDGTDENYCLDH-----KPDAPFCN
FECDNKR-KCIPKKEFVCDKSNEDIDKSDSHCKET-----SSSLTQSC
FHCKNGK--CISSLFRCDGENECGDNSDEMDCNGE-----TNLHMIRC
-----
FPCMSGG--CIQSSQYCDGKVDGDDGTDENYCLDH-----KPDAPFCN
  
```

LDLa

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 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

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ASTQFDCG-QGQCIPRSWVCDGNADCEDGKDEGAAGCAESHCAA--SEWE
-----TIGCIDIDSKC--SGFL
SKYEFTCQQDRTCIPIDFMCDGRPDCTDKSDE-VAGCKQAEITCPGEGHL
SKYEFTCQQDRTCIPIDFMCDGRVDCDTSDE-VAGCKQAEATCSVEGHL
SKYEFTCQQDRTCIPIDFMCDGRPDCTDKSDE-VAGCKQAEVTCPEGHL
ETHQFMCRDSSKKCIPNHWCNNDIDCDDGSDE-LNCTLVPVATGKCKGFL
KKDEWHCINDNNCIPTDWWVCDGKQDCMDGTDE-LQGCSSVDCS--DGFV
SKFEFTCT-DKMCIPDLVCDGVSHCLDGSDE-TIGCKDIENKC--KGFV
AKDQFKCK-NQECIPAAKYCDMVNDCLDESDE-HDGCVKHLNCT--NKFL
NATQFTCD-DKMCIPWAVVCDGEPNCLDDSDEKTSLQKHHCSR--EEFQ
NATQFTCD-DKMCIPWAVVCDGEPNCLDDSDEKTSLQKHHCSR--EEFQ
TADEWRV-DNNCIFMWWVCDGKQDCMDGSDE-LQGCSSHMSCE--DGFV
ASTQFDCG-QGQCIPRSWVCDGNADCEDGKDEGAAGCAESHCAA--SEWE
TDESEWRM-DNNCIIIDWVCDGRQDCMDGSDE-LQGCSTVLSCH--DGFV
ETHQFMCRDSSKKCIPNHWCNNDIDCDDGSDE-LNCTLVPVATGKCKGFL
REGKFKCS-DGTCIPMAWHCDAEIDCHDGSDEDEGEKCRYTTLCT--SGYM
TTDEFQCA-DHSCIPPEKFCDAKSDCYDGSDE-YIGCVKELKCN--NSFR
-----
-----VESVQPSIQVNSSEVTSTNFSDYNETISTTPLSST--TFI
-----EKT-NAVTIPTKWIAMA--SNDE-YVGCVKELKCN--NNFR
ETHQFMCRDSSKKCIPNHWCNNDIDCDDGSDE-LNCTLVPVATGKCKGFL
  
```

LDLa

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 T1E9W2_Anopheles_aquasalis
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 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

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CPHNHRCIP-NDYICDGDGDDCGDNSDENDCTGKNNF--TECTSA-----
C-RNKHCLRTSSWVCDGMRDCSDGSDHEHC-----VHECTLE-----
C-ANGRCLRRKQWVCDGVDDCGDGSDEKGC-----LNLCEPQ-----
C-ANGRCLRRKQWVCDGVDDCGDGSDEKGC-----LNLCEPQ-----
C-ANGRCLRRKQWVCDGVDDCGDGSDEKGC-----LNLCEPQ-----
C-ANGRCLRRKQWVCDGVDDCGDGSDEKGC-----LNLCEPQ-----
C-ODGKCIS-SLWLCDGSDYDCKDKSDENSPEBNCRRSLLSHSMLSGSDCQD
C-NNHHCIP-VTFHCDGSDDCDGDSDERNCSLILHILPEDCTHE-----
C-KNKRKINSHDWVCDGIDDCDGDGSDEENC-----FIGDLE-----
C-TDGHICIN-KEWVCDGRNDCPDGNDEWNCANKTSSASSCKTE-----
C-RDGHICIE-EDFKCDGSDPKDKDGSDEENCVGVVYSMDDECTLD-----
C-RDGHICIE-EDFKCDGSDPKDKDGSDEENCVGVVYSMDDECTLD-----
C-GNYHCIP-NSFLCDGDDCGDNSDEKLCPSVRNVPPEDCKLE-----
CPHNHRCIP-NDYICDGDGDDCGDNSDENDCTGKNNF--TECTSA-----
C-KNGHCLP-ITFHCDGSDDCDGDNSDEYCPVHYIPEPNTTD-----
C-ODGKCIS-SLWLCDGSDYDCKDKSDENSPEBNCRRSLLSHSMLSGSDCQD
C-KNFNCVS-KTWRCDGKDDCGDGSDETHC-DIQLVEPEKCLIE-----
C-KDSHCIR-KEWVCDGVDPDPDKSDEEKCS-NILSIEECNNE-----
-----
N-----QANTEDDGDLKTSN-----
C-KDSHCIR-NEWVCDGVDPDPDKSDEEKCS-NIVSIEKCNNE-----
C-ODGKCIS-SLWLCDGSDYDCKDKSDENSPEBNCRRSLLSHSMLSGSDCQE
  
```

LDLa

<u>Bemisia tabaci Asia 1</u>	----FGKFLC	KNRNQ	CIDDT	FLCNGHF	DKD	GSDEG	-GH	CASK	AQVA	AD	C
T1E9W2 <i>Anopheles aquasalis</i>	----HGKFEC	ANNDT	CIAT	IVCNGKAD	CD	DSDEG	-AG	CK	---	ND	S
P98163 <i>Drosophila melanogaster</i>	----KGFKFL	RNRRET	CLT	SVVCDGHS	DCS	DSDET	-DL	CHS	---	K	P
B4Q2Q9 <i>Drosophila yakuba</i>	----HGKFEC	ADNRET	CLV	SVVCDGHS	DCS	DSDET	-FL	CHS	---	K	P
B4IGA9 <i>Drosophila sechellia</i>	----KGFKFL	RNRRET	CLT	SVVCDGHS	DCS	DSDET	-DL	CHS	---	K	P
K4MUW4 <i>Actias selene</i>	WLGRRQYK	TDSS	FCLP	SEM	MCD	GMD	CKD	GS	DER	-S	F
Q1T728 <i>Rhyarobia maderae</i>	----RNFHLC	RDNR	CI	SLD	FLC	DGVR	NC	PD	YS	DEG	-I
O76952 <i>Aedes aegypti</i>	----HGKFEC	ADNRET	CLV	SVVCDGHS	DCS	DSDET	-FL	CHS	---	K	P
Q6X0I2 <i>Solenopsis invicta</i>	----NYQYMC	ANHR	-CI	SLK	VV	CD	KKD	CGD	GS	DEG	-PG
ADE34166.1 <i>Nilaparvata lugens</i>	----NERFPC	HDR	TL	CID	IS	AL	CNN	KR	DC	FD	GS
D5KXW4 <i>Nilaparvata lugens</i>	----NERFPC	HDR	TL	CID	IS	AL	CNN	KR	DC	FD	GS
BAC02725 <i>Periplaneta americana</i>	----KNLFLC	ADRQE	CV	VR	RL	CD	GT	FC	YD	GS	DEG
ADM34986.1_1_B tabaci_B	----FGKFLC	KNRNQ	CIDDS	FLCNGHF	DKD	GSDEG	-GH	CASK	AQVA	AD	C
CAJ19121 <i>Blattella germanica</i>	----KNLHLC	HDR	TL	CID	IS	AL	CNN	KR	DC	FD	GS
H2CLV8 <i>Antheraea pernyi</i>	WLGRRQYK	TDSS	FCLP	SEM	MCD	GMD	CKD	GS	DER	-S	F
XP_008180459 <i>Acyrtosiphon pisum</i>	----NRKFLC	ADH	KK	CID	VR	SV	VCD	YNN	DL	AD	S
UPI000252AABD <i>Apis florea</i>	----YDRYLC	KNQR	-CI	PL	NAT	C	DE	EKN	CGD	NS	DE
UPI0001758603 <i>Tribolium castaneum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
T1KD20 <i>Tetranychus urticae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
UPI0002063B8E <i>Apis mellifera</i>	----HDRYLC	KNQR	-CI	PL	NAT	C	NE	EKN	CGD	NS	DE
E2FLQ4 <i>Bombyx mori</i>	WLGRRQYK	TDSS	FCLP	SEM	MCD	GMD	CKD	GS	DER	-P	F

EGF

<u>Bemisia tabaci Asia 1</u>	A-KL	NC	-THS	--CV	SPDG	-PV	CV	CGS	GYHL	--EG	--NV	CE	DINEC	-LE
T1E9W2 <i>Anopheles aquasalis</i>	A-EL	K	CGDRP	--CK	RM	NG	RS	V	CL	CE	T	G	FR	NN
P98163 <i>Drosophila melanogaster</i>	D-AK	K	-AL	GAK	CH	M	P	A	S	G	A	E	C	F
B4Q2Q9 <i>Drosophila yakuba</i>	E-TK	K	-PL	GAK	CH	M	S	T	S	G	A	E	C	F
B4IGA9 <i>Drosophila sechellia</i>	D-AK	K	-AL	GAK	CH	M	P	A	S	G	A	E	C	F
K4MUW4 <i>Actias selene</i>	A-NHT	CL	GD	K	A	S	CV	P	D	R	A	G	-P	T
Q1T728 <i>Rhyarobia maderae</i>	K-AIK	C	-DHL	--CV	P	T	P	R	G	-A	I	C	V	C
O76952 <i>Aedes aegypti</i>	D-SMR	C	-PEG	--CK	A	T	P	H	G	-A	V	C	L	K
Q6X0I2 <i>Solenopsis invicta</i>	S-SAG	C	Q	S	N	--CH	Q	T	P	K	G	-S	V	T
ADE34166.1 <i>Nilaparvata lugens</i>	NGKAN	C	S	I	E	Q--CF	Q	S	P	S	G	-Q	I	C
D5KXW4 <i>Nilaparvata lugens</i>	NGKAN	C	S	I	E	Q--CF	Q	S	P	S	G	-Q	I	C
BAC02725 <i>Periplaneta americana</i>	P-TV	G	-SH	Q--CI	P	S	P	Q	G	-P	L	C	V	C
ADM34986.1_1_B tabaci_B	A-KL	NC	-THS	--CV	SPDG	-PV	CV	CGS	GYHL	--EG	--NV	CE	DINEC	-LE
CAJ19121 <i>Blattella germanica</i>	R-TAW	C	-NHR	--CI	P	T	P	Q	G	-P	Q	C	V	C
H2CLV8 <i>Antheraea pernyi</i>	A-NHT	CL	GD	K	A	S	CV	P	D	R	A	G	-P	T
XP_008180459 <i>Acyrtosiphon pisum</i>	N-SM	N	-SAA	F	E	C	L	R	K	P	H	G	-I	M
UPI000252AABD <i>Apis florea</i>	KLTAK	C	-QHN	--CR	K	T	P	K	G	-Q	C	S	R	S
UPI0001758603 <i>Tribolium castaneum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
T1KD20 <i>Tetranychus urticae</i>	--I	V	I	A	S	P	K	P	A	T	V	L	P	N
UPI0002063B8E <i>Apis mellifera</i>	KLTAK	C	-EHN	--CR	K	T	P	K	G	-A	Q	C	S	R
E2FLQ4 <i>Bombyx mori</i>	A-NHT	CL	GD	K	A	S	CV	P	D	R	A	G	-P	T

Calcium binding EGF

<u>Bemisia tabaci Asia 1</u>	WG	T	C	D	M	C	E	N	T	-V	G	G	Y	I
T1E9W2 <i>Anopheles aquasalis</i>	YGL	C	S	Q	G	C	I	N	T	-P	G	S	F	R
P98163 <i>Drosophila melanogaster</i>	DDL	C	S	Q	G	C	E	N	T	-S	G	G	Y	R
B4Q2Q9 <i>Drosophila yakuba</i>	DDL	C	S	Q	G	C	E	N	T	-S	G	G	Y	R
B4IGA9 <i>Drosophila sechellia</i>	DDL	C	S	Q	G	C	E	N	T	-S	G	G	Y	R
K4MUW4 <i>Actias selene</i>	RP	Q	C	S	H	Y	C	V	N	A	-D	G	H	F
Q1T728 <i>Rhyarobia maderae</i>	YGI	C	D	Q	K	C	K	N	L	-P	G	S	Y	S
O76952 <i>Aedes aegypti</i>	YGL	C	S	Q	G	C	E	N	T	-P	G	S	F	R
Q6X0I2 <i>Solenopsis invicta</i>	YGI	C	D	Q	C	M	N	V	-P	G	S	Y	A	C
ADE34166.1 <i>Nilaparvata lugens</i>	FGI	C	D	Q	K	C	S	N	L	-V	G	G	F	R
D5KXW4 <i>Nilaparvata lugens</i>	FGI	C	D	Q	K	C	S	N	L	-V	G	G	F	R
BAC02725 <i>Periplaneta americana</i>	YGI	C	D	Q	R	C	R	N	L	-Q	G	S	Y	S
ADM34986.1_1_B tabaci_B	WG	T	C	D	M	C	E	N	T	-V	G	G	Y	I
CAJ19121 <i>Blattella germanica</i>	YGI	C	D	Q	K	C	L	N	M	-P	G	K	Y	C
H2CLV8 <i>Antheraea pernyi</i>	RP	Q	C	S	H	Y	C	V	N	A	-D	G	H	F
XP_008180459 <i>Acyrtosiphon pisum</i>	YGI	C	D	Q	V	C	L	N	L	-E	G	S	Y	T
UPI000252AABD <i>Apis florea</i>	YGI	C	D	Q	Q	C	I	N	S	-A	G	S	Y	T
UPI0001758603 <i>Tribolium castaneum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
T1KD20 <i>Tetranychus urticae</i>	NG	N	C	S	D	I	C	L	D	L	G	N	G	T
UPI0002063B8E <i>Apis mellifera</i>	YGI	C	D	Q	Q	C	I	N	N	-A	G	S	Y	S
E2FLQ4 <i>Bombyx mori</i>	RP	Q	C	S	H	Y	C	V	N	A	-D	G	H	F

<u>Bemisia tabaci Asia 1</u>	SL	KK	I	K	S	L	Y	L	T	S	---	R	I	S
T1E9W2 <i>Anopheles aquasalis</i>	TQ	R	S	I	G	A	L	Y	L	S	---	L	H	Q

P98163_Drosophila_melanogaster	TQMTIMGMHLREDNVRNHYVQVAGNLSK----	VIGVAYDGS	SHIYWTNIQ
B4Q2Q9_Drosophila_yakuba	TQMTIMGMHLREDNVRNHYVQVAGNLSK----	VIGVAYDGS	SHIYWTNIQ
B4IGA9_Drosophila_sechellia	TQMTIMGMHLREDNVRNHYVQVAGNLSK----	VIGVAYDGS	SHIYWTNIQ
K4MUW4_Actias_selene	TRNEIKYLKVKK-----	KVVVTLATGIKK----	AHGVTNNGIYVYVWETA
Q1T728_Rhyarobia_maderae	STNQIRGFYLEK----	NYYFVIADNLER----	AVGLSYDGNHVVWTELE
O76952_Aedes_aegypti	TQKSIIGGLHLNT----	KHQYVAKDLSQ----	VIGVSYDGRHVVWTDIS
Q6X0I2_Solenopsis_invicta	TRTSILGMHVDS----	EKFPSLATNLNH----	AVGVAMYGDYVYWSNLB
ADE34166.1_Nilaparvata_lugens	LGREIRVRFLKKS----	GMYHAVARNLSQ----	AIGVEVQGHVVYWTNIY
D5KXW4_Nilaparvata_lugens	LGREIRVRFLKKS----	GMYHAVARNLSQ----	AIGVEVQGHVVYWTNIY
BAC02725_Periplaneta_americana	STKEIRGLYVHK----	DPYVVAQSLER----	AVGISYDGNHVVWTELM
ADM34986.1_1_B_tabaci_B	SLKKIKSLYLS-----	RISMTVASEVPY----	ATGVSFDDGKHVVYWTTL
CAJ19121_Blattella_germanica	STDEIRGFYIKK----	DPYFVIASKLER----	AVGISYDGRHVVWTDLM
H2CLV8_Antheraea_pernyi	TRNEIKYLKVKK-----	KVVVTLATGIKK----	AHGVTNNGIYVYVWETA
XP_008180459_Acyrthosiphon_pisum	SLRQIKVFNLEL----	LHSFTLIDDLQH----	VTGLAVDKLTLYWTLYL
UPI000252AABD_Apis_florea	IKSEIHGYLDS-----	QIYFPISQNLQH----	AVAVSLDANYVYWSDI
UPI0001758603_Tribolium_castaneum	-----	-----	-----
T1KD20_Tetranychus_urticae	RALQLEFPYPIDDSVNRAPPPYPPITDANYMKNVI	AVTFDYENKRLIYSDI	---
UPI0002063B8E_Apis_mellifera	IKSEIHGYLDS-----	QIYFPISQNLQH----	AVAVSLDANYIYWSDE
E2FLQ4_Bombyx_mori	TRNEIKYLKVKK-----	KVVVTLATGIKK----	AHGVTNNGLYVYVWETA

LDLb

<u>Bemisia_tabaci_Asia_1</u>	D-GVESIVR--ASEDGSHEETTIVDSGVGSPEDLAVDWVVTGNIYFTDGEYQ		
T1E9W2_Anopheles_aquasalis	H-KTESIER--AQEDGSKHELLELLTAGLISPEDIALDWLTGNIYFSDSGQM		
P98163_Drosophila_melanogaster	N-EAESIVK--ANGDGSNAEILLTSGLDAPEDLAVDWLTGNIYFSDNIMR		
B4Q2Q9_Drosophila_yakuba	N-EAESIVK--ANGDGSNAEILLTSGLDAPEDLAVDWLTGNIYFSDNIMR		
B4IGA9_Drosophila_sechellia	N-EAESIVK--ANGDGSNAEILLTSGLDAPEDLAVDWLTGNIYFSDNIMR		
K4MUW4_Actias_selene	E-GHQAIIVKAHIDDVNTRQVIVGLGLEDPGDI AIDFMARHIYFGDAERG		
Q1T728_Rhyarobia_maderae	H-GEEAIVR--IDEDGSMETLVTAGIYQPEDLEVDWITGNIYFTDLEKK		
O76952_Aedes_aegypti	F-KTESIER--SLEDGSKHELLELLTSGLDAPEDLEVDWITGNIYFSDSGHM		
Q6X0I2_Solenopsis_invicta	ENGYNTIVKKRTYHPQAPNEVIVTGLALITGIDVDWITKNIYFADEDNH		
ADE34166.1_Nilaparvata_lugens	E-GDEMIVR--AQQLGAEEMPIVTAGLREPEDLAVDWVVTGNIYFTDSGMK		
D5KXW4_Nilaparvata_lugens	E-GDEMIVR--AQQLGAEEMPIVTAGLREPEDLAVDWVVTGNIYFTDSGMK		
BAC02725_Periplaneta_americana	L-GEEAIVR--SLEDGSKHEAIVTAGVYQPEDLAVDWITGNIYFTDMEAQ		
ADM34986.1_1_B_tabaci_B	D-GVESIVR--ASEDGSHEETTIVDSGVGSPEDLAVDWVVTGNIYFTDGEYQ		
CAJ19121_Blattella_germanica	F-GEEAIVR--SLEDGSHVETLVTAGLYEPEDLMVDWVTENIYFTDAEAK		
H2CLV8_Antheraea_pernyi	E-GHQAIIVKAHIDDVNTRQVIVGLGLEDPGDI AIDFMARHIYFGDAERG		
XP_008180459_Acyrthosiphon_pisum	D-GNSAIVR--ANKSEKPEIIVDSGLGSPENLVIDIITHNLYFTDAKMK		
UPI000252AABD_Apis_florea	N-GNEAIVK--SLEDGSKREIIVTGLSSPDNIAVDWVTDNIYFTDSGYM		
UPI0001758603_Tribolium_castaneum	-----	-----	-----
T1KD20_Tetranychus_urticae	--KSATINS--VFNGTDFRVIATNQ--SNVEGLSLDRQTSDLWWTSSNDS		
UPI0002063B8E_Apis_mellifera	N-GNEAIVK--SLEDGSKREIIVTGLSSPDNIAVDWVTDNIYFTDSGYM		
E2FLQ4_Bombyx_mori	E-GHQAIIVKAHIDDVNTRQVIVGLGLEDPGDI AIDFMARHIYFGDAERG		

LDLb

<u>Bemisia_tabaci_Asia_1</u>	QIGICTYNEELVETKCAVLHNKDLNKPRAIIVLNPADAVMYWSDWGFK-PL			
T1E9W2_Anopheles_aquasalis	HIAVCSNDGFY----CKAIVQEQLHKPRGIALLPQNGSLFYSDWGDN-AQ			
P98163_Drosophila_melanogaster	HIAVCSNDGGLN----CAVLVTQDVHQPRSLAVWPQKGLMFWTDWGEK-PM			
B4Q2Q9_Drosophila_yakuba	HIAVCSNDGGLN----CAVLVTQDVHQPRSLAVWPQKGLMFWTDWGEK-PM			
B4IGA9_Drosophila_sechellia	HIAVCSNDGGLN----CAVLVTQDVHQPRSLAVWPQKGLMFWTDWGEK-PM			
K4MUW4_Actias_selene	LIFVCYDSGFK----CFTL-KADTKHPKFITLDPVHGKMYWADWHSR-PV			
Q1T728_Rhyarobia_maderae	HIGVCNNGSL----CTVI V NEDIEKPRAIALLPNEGLMFWTDWG-K-SI			
O76952_Aedes_aegypti	MIAVCSNNGVH----CTILIQD TLHKPRGIALMPQNGTLFYSDWGDN-AM			
Q6X0I2_Solenopsis_invicta	CIGVCTNDGTY----CTVLI-KD TDKPTGVALLEPTQ GKMYWSDWGT F-PH			
ADE34166.1_Nilaparvata_lugens	MIGVCCADASH----CAVLHNRDINNPRGIALLPYEGMYWSDWGNR-SV			
D5KXW4_Nilaparvata_lugens	MIGVCCADASH----CAVLHNRDINNPRGIALLPYEGMYWSDWGNR-SV			
BAC02725_Periplaneta_americana	HIGVCVNGSS----CAVLVNEDIDKPRAIALLPLEGLMFWSDWGER-PL			
ADM34986.1_1_B_tabaci_B	QIGICTYNEELVETKCAVLHNKDLNKPRAIIVLNPADAVMYWSDWGFK-PL			
CAJ19121_Blattella_germanica	HIGVCNNGSM----CTVLVNEDIDKPRAIALLPTEGLMFWSDWGK--I			
H2CLV8_Antheraea_pernyi	LIFVCYDSGFK----CFTL-KADTKHPKFITLDPVHGKMYWADWHSR-AV			
XP_008180459_Acyrthosiphon_pisum	HIGVCNNDGSV----CTVLHNKNIDKPRAVAVSPLDGLMYWTDWGN-PM			
UPI000252AABD_Apis_florea	HIGVCNDDGSY----CTV I I KERRDKPRGLALLPSSGI FYWTEWGMN-SS			
UPI0001758603_Tribolium_castaneum	-----	-----	-----	YWTDWGHK-PH
T1KD20_Tetranychus_urticae	SIYRLNLKIARYP--QKIIDLGPEDKLRGIAVHGCRYFVYWANWNP-NAPA			
UPI0002063B8E_Apis_mellifera	HIGVCNNDGSY----CTV I I KERRDKPRGLALLPSSGI FYWTEWGMN-SS			
E2FLQ4_Bombyx_mori	LIFVCYDSGFK----CFTL-KADTKHPKLTITLDPVHGKMYWADWHSR-PV			

LDLb

<u>Bemisia_tabaci_Asia_1</u>	IARSMDGSDFYEFVTEELHWENGLTIDHGNRRVYVVDARLGTVETVD FQ
T1E9W2_Anopheles_aquasalis	IGRARMDGSEQRIVSDGIHWENGLTLDWPNERLYVVDAAKLKQIESMRFQ
P98163_Drosophila_melanogaster	IGRASMDGSRSRPIVSDNIEWENGLALDMPHQRIYVVDAAKLGSVQTVRPD
B4Q2Q9_Drosophila_yakuba	IGRASMDGSRSRPIVSDNIEWENGLALDMPHQRIYVVDAAKLGSVQTVRPD

B4IGA9_Drosophila_sechellia
 K4MUW4_Actias_selene
 Q1T728_Rhyarobia_maderae
 O76952_Aedes_aegypti
 Q6X0I2_Solenopsis_invicta
 ADE34166.1_Nilaparvata_lugens
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 UPI0001758603_Tribolium_castaneum
 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

IGRASMDGSRSRPIVSDNIEWPNGIALDMHQERIYVWDAKLGSVQTVRFPD
 IMRAKMDGSSSEVLVESMTSFASGLALDVPNDRIYFVD---KTIKVVLLS
 IAKAGMDGSKPKFVSSGLEYPNGIAYDYHYSRLYVWVDGKIAVIESIKLD
 IGAAGMDGSKKRILIEQDIHWPNGLCLDWPNGRYVWVDAKLLKIESIKLD
 IAVAGMDGKNVRIFFVNVKLEWPKSVTIDYVNERLYVWVDAKSKMIESVRLD
 IARSMDGSDVFEFVSENLGWPNGITIDHGNQRLYVWVDAKMTTIESIRLD
 IARSMDGSDVFEFVSENLGWPNGITIDHGNQRLYVWVDAKMTTIESIRLD
 IARAGMDGSKPEAFISTNLHYANGLTIDHGNRRVYVWVDAKLGTVETVDFQ
 IARAGMDGSKPEAFISTNLHYANGLTIDHGNRRVYVWVDAKLGTVETVDFQ
 IMRAKMDGSSSEVLVESMTSFASGLALDVPNDRIYFVD---KTIKVVLLS
 IGRSGMDGSRPQRFVTVQNIHWPNGVHVDYVVGKRIYVWVDAKMQFIESIRLD
 ILMAGMDGKNIITVLVNDLEWPNLSLIDYVNNRLYWIDTKQKMIESIRLD
 IARALMDGTNGSSSIFISSDIHWPNGLTIDYVNSRLYVWVDAKMLTLESIRLD
 IQRAYLSGYNITSIIITGKIMPNNAVITIDHQLQKLYWVTDARLQDKIERCLD
 ILMAGMDGKNIITVLVNDLEWPNLSLIDYVNNRLYWIDTKQKMIESIRLD
 IMRAKMDGSSSEVLVESMTSFASGLALDVPNDRIYFVD---KTIKVVLLS

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 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

GRDRRKILTDLNDHPFAIAVFPEDKIYWSGWTNQEIVECNKFTGKNRVQVV
 GRDRVTVLLSGVLKHPFSVAVFNDRIYWSWDWTKSIQSCDKFTGKGRQNMV
 GTGRRTVLDGMLKHPYGLAIFEDQLYWSDWATKSVHACHKFSGKDHRILA
 GTGRRTVLDGMLKHPYGLAIFEDQLYWSDWATKSVHACHKFSGKDHRILA
 GTGRRTVLDGMLKHPYGLAIFEDQLYWSDWATKSVHACHKFSGKDHRILA
 TKVVYSLFKEAHHHPYASVFPENTVYWSDWISDSIQTTDKIHSQSQRQVL
 GSDRRILKDVVKHPYSISVFPENTLYWSDWHGRDIQACNKFTGKEHRVIV
 GTNRVTVLADVLKHPFSIAVFNDRLYWSWDWTKSIQSCDKFNGKDRKIVV
 GTDRRIVLHDIIQEPFSMTVPFNKLYWSDWE SNGIQTCKNFTGKDWKILV
 GTDRRIVLNEIIVKHPYASIAVFPEDTIYWSWDWTKSIQSCDKFTGKNRKHTVI
 GTDRRIVLNEIIVKHPYASIAVFPEDTIYWSWDWTKSIQSCDKFTGKNRKHTVI
 GSDRRVVLKDVVKHPYASIAVFPEDTIYWSDWHGRDIQACNKFTGKDHRILV
 GRDRRKILTDLNDHPFAIAVFPEDKIYWSGWTNQEIVECNKFTGKNRVQVV
 GTDRRIVLNEIIVKHPYASIAVFPEDTIYWSDWQGHGTSQSCDKFTGKNRHTVI
 TKVVYSLFKEAHHHPYASVFPENTVYWSDWISDSIQTTDKIHSQSQRQVL
 ATDRRVIVTEYVDHPYSVTVFPEDKLYWSDWSSKEIKVCNKFTGKDSKTLI
 GTDRRIVLKGTAKKPFSLAVPENKLYWSDWISNTIQSCDKFSGKDWETLV
 GTDRRIVLNEIIVKHPYASIAVFPENRLYWSDWSTHSIQSCDKFTGKNRHTVI
 GTNRRAIISKTPKHPFAAAAYGSFIFWTDWGGQGVYRADKLFNDVKAIL
 GTDRRIVLKGIAKKPFSLAVPENKLYWSDWISNTIQSCDKFSGKDWQTLV
 TKVVYSLFKEAHHHPYASVFPENTVYWSDWISDSIQTTDKIHSQSQRQVL

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 P98163_Drosophila_melanogaster
 B4Q2Q9_Drosophila_yakuba
 B4IGA9_Drosophila_sechellia
 K4MUW4_Actias_selene
 Q1T728_Rhyarobia_maderae
 O76952_Aedes_aegypti
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 ADE34166.1_Nilaparvata_lugens
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 UPI0001758603_Tribolium_castaneum
 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

KSRK--DKIYGVHIFHPTLQNHSLP NPC---AGKCSIDICALSPSAS----
 HDRV---IFDVHIYHSSLHPSKSH HPCQ---NHTCSHLCLLTSNS-----
 KDRT---IYAVHIYHPAKQPNSP HGCE--NATCSHLCLLAEPEI----
 KDRT---IYAVHIYHPAKQPNSP HGCE--NATCSHLCLLAEPEI----
 LKMD--TSVFGHMYHPALMKKIP HPCD--EHPCSHFCLVTSID-----
 REKN--KPIFGIHLHYHPATMRSAN NPCE--ISGCSIDICLLAPNQ-----
 HDRQ---IFDVHIYHSGLQPKGD HPCD--GTFCSHLCLLAPND-----
 RNHN--KPYSVHMDHSAIKPNID NPCE--SNPQSLCMLNQNK-----
 QDKN--RIYGIKVVHPAMHDIDQIN YCF--GAPCSIDLCLLAPERVDLRS
 QDKN--RIYGIKVVHPAMHDIDQIN YCF--GAPCSIDLCLLAPERVDLRS
 REKSKGDFIYGVHIYHPSMMKLV NPCD--NNWCSIDLCLLAPNK-----
 KSRK--DKIYGVHIFHPTLQNHSLP NPC---AGKCSIDICALSPSAS----
 REKSKKDFIYGVHIYHPSMMKLV NPCD--KADCSIDLCLLAPNR-----
 LKMD--TSVFGHMYHPALMKKIP HPCD--EHPCSHFCLVTSID-----
 RENK--NRVYGMQINHPSLFESQMP NPCE--QKCSIDLCLLAPKTE-----
 NTNN--TVYGVHIYHSLVKPKIP NPCE--SKPQSLCLLNSQN-----
 KEQK--EYIYGITIIYHPNNHKTPL NPCE--HKBQSLCLLNSQN-----
 TKIN--NPRGIAVVAKDSDDCLK NPCE--GPFINGGCSIDLCLLNSQN-----
 NTNN--TVYGVHIYHSLVKPKIP NPCE--SKPQSLCLLNSQN-----
 LKMD--TSVFGHMYHPALMKKIP HPCD--EHPCSHFCLVTSID-----

EGF

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 B4IGA9_Drosophila_sechellia
 K4MUW4_Actias_selene

-----SGGKGYSCLCFDPNKTILSPSGEWCQE-QPKESSVIVSIGNFVFLQKV
 -----TYACGCPSPGMLQPNRHTCOETAKRQSLLLGIGSYLLSLKH
 -----GHSCACPDGMRLAPDHRRCMLMEKRQRLFLIGLQVLLIEIEH
 -----GHSCACPDGMRLAPDQRCMLMEKRQRLFLIGLQVLLIEIEH
 -----GHSCACPDGMRLAPDLRRCMLMEKRQRLFLIGLQVLLIEIEH
 -----TYSACAPDEMEENKNGRCIPDDYRPLHLIVSGSRLFTKFRLL

Q1T728_Rhyparobia_maderae
 076952_Aedes_aegypti
 Q6X0I2_Solenopsis_invicta
 ADE34166.1_Nilaparvata_lugens
 D5KXW4_Nilaparvata_lugens
 BAC02725_Periplaneta_americana
 ADM34986.1_1_B_tabaci_B
 CAJ19121_Blattella_germanica
 H2CLV8_Antheraea_pernyi
 XP_008180459_Acyrtosiphon_pisum
 UPI000252AABD_Apis_florea
 UPI0001758603_Tribolium_castaneum
 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

LDLb

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 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

IEVINLNT--KAMTAFYFKDEVPKYIALAPEESKMFVAFQKSMHSIS-G
 VEVINTINHHRKTI MNHLQGDIPRGI AVI PSEGIMVYVSLTSPT-----TA
 VEVINTINHHRKTI MNHLQGDIPRGI AVI PSEGIMVYVSLTSPT-----TA
 VEILSLNTMERRAILHTLEGEIPLDVAVIP EEGVMFVAFSRHVIGD---GF
 VEVFSFFS HRRKLLDREFDDEKPFAMTLP EEEGLMFVIAKABD-----HL
 IEILSLTTLERPVLHSP EGEVPLDIAVVP EEEGLMFIAMSRHLTSSENG
 IEVLSLRTLHRAVVYRFDRETFV SFCVLP HYGKMLVAVMQTDNDN--RI
 LDVLSLSTKTHTTIFKEEGHIEFAVTLV PDKSFMFVAMKEGS-----HI
 IEVHSLNSKEKTIFYF--KDEPYDIALVPEEGIMMVVFRRDE-----LY
 IEVYNFNTNSRKILHDTNGETPE SIALVPEEGIMFVAFRRFGQR---DG

 IEVHSLNSKQKTIFYF--KDEPYDIALVPEEGIMMVVFRSDG-----LY
 IEVLSLRTLHRAVVYRFDRETFV SFCVLP HYGKMLVAVMQTDNDN--RI

LDLb

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 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

HIDRINM-DGSLSTLTHMTSLK--LQGP-DVALHYDSDSRRVYWADHSAG
 HIDQLAL-TGR-GPHAHVME DR--IGSNGSIGFHVHDHDLRAVFWSDQSSG
 HIDKIPL-SGK-GEQVHVFE DD--LGDD-DIKLVTDYETQTIFWSDSDLG
 HIDKIPL-SGK-GEQVHVFE DD--LGDD-DIKLVTDYETQTIFWSDSDLG
 YVDSIGL-DGD--GRRHIVTVN--IRGP-RIILRFLHGMDNVYLDENGG
 HIDRISM-DGK-GEHTHIVESY--LEGP-TLNLYYDKMERIFWADPNSG
 HIDRLDM-TGR-GPHLHVIEER--LSGNGS FNFVIDRDLRTVYWN DMGSS
 TLYEMQM-NGL--GKRKLIREG--LIGP-QLPMYD RDSKTLFVSDLLPG
 HIDKLSMASGDVMSRTHIFEEN--LRGP-FIPLFYD GMLHRMYWADSGTR
 HIDKLSMASGDVMSRTHIFEEN--LRGP-FIPLFYD GMLHRMYWADSGTR
 HIDRMNM-DGR-GAHTHVIETS--LDGP-IISLFYDSDLHRVFWTDBNNE
 HIDRINM-DGSLSTLTHMTSLK--LQGP-DVALHYDSDSRRVYWADHSAG
 HIDRITM-DGR--GRRHIVTVN--IRGP-IISLHYDKELHRVYLDENEG
 YVDSIGL-DGD--GRRHIVTVN--IRGP-RIILRFLHGMDNVYLDENGG
 HIDRIDM-DGSIQSLVHMVEYG--LTGD-EIALHFD MITRLLYFTDYKNG
 HIDLMNM-NGL-GPKITIVGNKTVLIGP-KISLSYD GDFKQLFWSDDGSG
 HVDRFLM-DGT--SRTHPIENG--LLGP--ISLYSDIHRILIADSGTR
 -----DG-----VCIPYELTCDLI-----
 YIDLMM-NGL-GPKITIVGNKTLIGP-KISLSYD GDFKQLFWDQDQSG
 YVDSIGL-DGD--GRRHIVTVN--IRGP-RIILRFLHGMDNVYLDENGG

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 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

LIESTDINGNDRQVYR-D-VSSPLALTDVDRDLYWTS DGRPHLYYSEKAN
 RIEMTSYEGDTRHLRY-DYLRHPVSM TVIGDELFWTGYRSQRLYWSDKHN
 RISYSNYRVPHSQIFR-GKRRPYSLAMVHDLFWNBLGTPRIYWTHKSN
 RISYSNYRVPHSQIFR-GKRRPYSLAMVHDLFWNBLGTPRIYWTHKSN
 IIDYLHPEGTGRENFR-ELSTSISSMAVTENYIFWTD RRTPKLYWANIHE
 DIRSAAKNGMDEKIYK-TGLVQPF DVSSLGHELFWTDWGYPPYVWADKYD
 KIEFTSYEGDTRHLFR-EFLRHPV SIAIVGDSIFWTCYRSKRLYWSDKHN
 YIYSHSAQ--DTRILR-SGKSPHSLTVAGDNLFWIB--SQNKLYSTNFR
 RIEHTNWNGEERHTYS-ELWSSPISVTSVGTDFWSTPGFKNVYANKLE
 RIEHTNWNGEERHTYS-ELWSSPISVTSVGTDFWSTPGFKNVYANKLE
 EIGSAAADGMDQHVRSDVVEGSPIDIASVGRDMFVWMTWAHPYLYWASKFN
 LIESTDINGNDRQVYR-D-VSSPLALTDVDRDLYWTS DGRPHLYYSEKSN
 QIGSAAANGMDQHVIK-HSINNP SDVASLGRDLFWTDW GQPYIYWANKFD
 IIDYLHPEGTGRENFR-ELSTSISSMAVTENYIFWTD RRTPKLYWANIHE
 IIDSVEEDGDRRIIK-K-AGTVRDI VSIYD IVWVSEGSKILNWDNDV
 RIGSTTIPGFETYILR-TGSEPVSLALLGDYLFWTDQYKSNQLYWTSKTI
 NIESTSVEGDRRHGFR-SLQTNPIGITSLSKEVFWNRRNSKELYWADKYN
 --SHCVNGSD-----
 RIGSTTIPGFETYILR-TGSEPVSLAILGNLFWTDQYKSNQLYWTSKTI
 IIDYLHPEGTGRENFR-ELSTSISSMAVTENYIFWTD RRTPKLYWANIHE

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 B4IGA9_Drosophila_sechellia
 K4MUW4_Actias_selene
 Q1T728_Rhyparobia_maderae
 O76952_Aedes_aegypti
 Q6X0I2_Solenopsis_invicta
 ADE34166.1_Nilaparvata_lugens

A--SMFVRKINMERFLR-----SPKDH--YRMFVTAI---IP
 M--GVTKRMTIP-----MPPGVAIPERIPVAAT---QP
 M--GPRKVIDIMEKDDPAAIMPYVPVATP---NGIPLAAS---SP
 M--GPRKVIDIMEKDDPAAILPYVPVAMP---NGIPLAAS---SP
 M--GPRKVIDIMEKDDPAAIMPYVPVATP---NGIPLAAS---SP
 T--SHKIRRIELR-----AFSNS--SQLLLQTTYPSP
 S--ESLMKRISVD-----VHS--QKLRLLVGS---RG
 L--GVTKKTITID-----KPPYGAFPDEIVLLVS---QP
 A--SVKQKTVFEDLSKLNNDNMTSLPGHLPYSR--DAQYVVTL---R
 F--KGSKVLDSL N-----LVYSN--SKIFITAV---TG

D5KXW4_Nilaparvata_lugens F--KGSXVLDLSN--LVYSN--SKIFITAV---TG
 BAC02725_Periplaneta_americana S--QSRMKRLDLD--VEEDS--DKLFLVAV---RG
 ADM34986.1_1_B_tabaci_B A--SMPVRRKINMERFLR--SPKDH--YRMFVTAI---IP
 CAJ19121_Blattella_germanica G--ESRMKRLMLD--VPKS--QMLKLVSV---RG
 H2CLV8_Antheraea_pernyi T--SHKIRRIHLR--AFSNS--SQLLQTTYPSPSP
 XP_008180459_Acyrtosiphon_pisum E--DRASRALDID--NWKTD--SNLYLTVAV---NG
 UPI000252AABD_Apis_florea T--KQYQKRIQLQ--TPEDL--DKMQLTGM---H
 UPI0001758603_Tribolium_castaneum SGDDDYNNKKITLD--LPDDI--DMYLVSV---TP
 T1KD20_Tetranychus_urticae ---ESLKLKAN---
 UPI0002063B8E_Apis_mellifera T--KQYQKRIQLQ--TPENV--DKMQLTGM---H
 E2FLQ4_Bombyx_mori T--SHKIRRIHLR--AFSNS--SQLLQTTYPSPSP

EGF

Bemisia_tabaci_Asia_1 DKTTTRDHPCCQNNNGKCSHFCL--LTSRNF-KHVCSCPDGMMLADN-GQDC
 T1E9W2_Anopheles_aquasalis IR-RQEHPCRRNAGCSHICV--AAGLYSAACVCPGMVFNNTSLSKVC
 P98163_Drosophila_melanogaster VG-QESHPCQQNGGCSHICV--GEGPYHSICLCPAGFYRBDAGNRTC
 B4Q2Q9_Drosophila_yakuba IG-LESHPCQQNGGCSHICV--GEGPYHSICLCPAGFYRBDAGNRTC
 B4IGA9_Drosophila_sechellia VG-QESHPCQQNGGCSHICV--GEGPYHSICLCPAGFYRBDAGNRTC
 K4MUW4_Actias_selene HDPLTQHPCHRDN-PCSQVCVPTYSPTNPYSYKCLCSGLVFSNG--RC
 Q1T728_Rhyparobia_maderae IRTKPRHPCHRDN-PCSQVCVPTHSPTNPYSYKCLCSGLVFSNG--RC
 O76952_Aedes_aegypti LQ-RYDHPCCMQNGGCSHICV--PAGMYSSACICPTGMVFNNTSLSKVC
 Q6X0I2_Solenopsis_invicta KDDIPKHDCCQNNNGKCSHVCL--PSLITSFICACPDGMMLADN-NRTC
 ADE34166.1_Nilaparvata_lugens LDSQRNHPCAVDNGNCSHICL--VSPKKDIMREACPDGMMLKKEG-GREC
 D5KXW4_Nilaparvata_lugens LDSQRNHPCAVDNGNCSHICL--VSPKKDIMREACPDGMMLKKEG-GREC
 BAC02725_Periplaneta_americana VRAQPDHPCHKNNNGGCSHICA--LALKHTVCLCPVGMVFNNTSLSKVC
 ADM34986.1_1_B_tabaci_B DKTTTRDHPCCQNNNGKCSHFCL--LTSRNF-KHVCSCPDGMMLADN-GQDC
 CAJ19121_Blattella_germanica IRAKPNHPCCQENGGCSHICA--LSQKRMVCLCPGMMLKKN-EKTC
 H2CLV8_Antheraea_pernyi HDPLTQHPCHRDN-PCSQVCVPTHSPTNPYSYKCLCSGLVFSNG--RC
 XP_008180459_Acyrtosiphon_pisum IHRNIQHPCCQNNNGGCSHICL--LSEKGVKVCVCPGMVFNNTSLSKVC
 UPI000252AABD_Apis_florea KTYVKEHLCKRNNNGKCSHVCL--LSNNPSSYICACPDGMMLADN-NRKC
 UPI0001758603_Tribolium_castaneum RKILGLS-PCQRSNGGCSHLCL--QSHKTIVCACPDGMMLADN-NRKC
 T1KD20_Tetranychus_urticae -RDCPFDFYRQINGKCSHICL--LSDGKIDCPDGM--GDEAN
 UPI0002063B8E_Apis_mellifera KTYVKEHPCKRNNNGKCSHVCL--LSNNPSSYICACPDGMMLADN-NRKC
 E2FLQ4_Bombyx_mori HDPLTQHPCHRDN-PCSQVCVPTHSPTNPYSYKCLCSGLVFSNG--RC

LDLa

Bemisia_tabaci_Asia_1 EEIAACGAHEYHCTTGE-----CIPMSKKCDRNDPCPY-GEDETF--C
 T1E9W2_Anopheles_aquasalis VRAVDC--ESRCESGE-----CLSAGKRCNGHPCDPCD-GSDERN--C
 P98163_Drosophila_melanogaster VEALDC--EFRCHSGE-----CLTMNHRNCRGRRD-CVD-NSDEMN--C
 B4Q2Q9_Drosophila_yakuba VEALDC--EFRCHSGE-----CLTMNHRNCRGRRD-CVD-NSDEMN--C
 B4IGA9_Drosophila_sechellia VEALDC--EFRCHSGE-----CLTMNHRNCRGRRD-CVD-NSDEMN--C
 K4MUW4_Actias_selene TEVARCSSEIYCHKSNI-----CVEKHKRCNGVVDCSR-GEDEEG--C
 Q1T728_Rhyparobia_maderae FHPSICSDKFKCKEDNL-----CIPRDFRCNGRRD-CPS-GEDELD--C
 O76952_Aedes_aegypti IDAIDC--EFGCTSGE-----CLTISKRCNGNXCAD-GSDEKG--C
 Q6X0I2_Solenopsis_invicta ISHHCCSNEYKCSSEHNI-----CIQRNQLCDGTENCPN-GEDETFSE--C
 ADE34166.1_Nilaparvata_lugens SVREACEERGFEGGESSVAGIVRH CIAAKKKCDGNKDCPM-GEDEDRSLC
 D5KXW4_Nilaparvata_lugens SVREACEERGFEGGESSVAGIVRH CIAAKKKCDGNKDCPM-GEDEDRSLC
 BAC02725_Periplaneta_americana TTPVHC--EFKCTSGE-----CIPGRMRCGKIDCPNGGDEIN--C
 ADM34986.1_1_B_tabaci_B EEIAACGAHEYHCTTGE-----CIPMSKKCDRNDPCPY-GEDETF--C
 CAJ19121_Blattella_germanica EQPVVCSDDKFKCKSDNL-----CIPRNFRCNGRRD-CQS-GEDELD--C
 H2CLV8_Antheraea_pernyi MEVARCSSEIYCHKSNI-----CVEKHKRCNGVVDCSR-GEDEEG--C
 XP_008180459_Acyrtosiphon_pisum TSLGCKDEYRCYKTSYGE-----CISSESRCDFFKIDCPR-GDDEVVVK
 UPI000252AABD_Apis_florea NSQTCNTGGEIKGGEHDK-----CIKSYQRCDGTLDCPS-GEDESSSF
 UPI0001758603_Tribolium_castaneum IKRIDCTHEFPKSGSNS-----CIFKFRCDGERNCPN-GEDETD--C
 T1KD20_Tetranychus_urticae S--CSQDMFKCPGGP-----CIPASRRCDRADCPCD-ISDELD--C
 UPI0002063B8E_Apis_mellifera NSQTCNTGGEIKGGEHDK-----CIKSYQRCDGTLDCPS-GEDESSSF
 E2FLQ4_Bombyx_mori TEVARCSSEIYCHKSNI-----CVEKHKRCNGVVDCSR-GEDEEG--C

LDLa

Bemisia_tabaci_Asia_1 PA-----QCE--TDQFA--CFDGQKCIDAKDRCNMHPDCHDHSDE-
 QPRHGPLEARVSVQCR-WNEFR-CADGRKCISAARRCDKVVHDCADASDE-
 DEEHRR---KPKVLCSPNQFA-CHSGEQCVDKERRCDNRKDCNDHSDE-
 DAEHRR---KPKVHCS-PSQFA-CHSGEQCVDKERRCDNRKDCNDHSDE-
 DEEHRR---KPKVLCSPNQFA-CHSGEQCIDKERRCDNRKDCNDHSDE-
 THITKK---PESQCD-PNEIL-CYG--LCVAK---DSFSPSPGKH--
 KSD-----KCS-DTEFS-CKNGQ-CIPGDKLDDKDCIDGSD-
 DEAGQP---KQLHCQ-YDEFM-CADKSKCIDQTRRCDHVDCTGSD-
 RIKG-----RCK-ENQFM-CKNGD-CIRLKDRCNSRYDCDDQSD-
 GLKDFS-----KLHCL-PGQFA-CLDGSRCIPDALLCNWHADCDHSDET
 D5KXW4_Nilaparvata_lugens GLKDFS-----KLHCL-PGQFA-CLDGSRCIPDALLCNWHADCDHSDET
 BAC02725_Periplaneta_americana HKV-----NCR-DDQFV-CHNGQ-CISITKKCDGSDSCRDGSDE-


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ADM34986.1_1_B tabaci_B      PA-----QCE--TDQFA--CFDGQKCIDAKDRCNMHFDCDHDSDE--
CAJ19121_Blattella_germanica EAK-----KCL-DSQFT-CKNGQ-CISIEKLCNGERFDCLDGSDE--
H2CLV8_Antheraea_pernyi     THITKQ-----PESQCE-PNEIL-CYG--LCVAK---DSSPSPSPGKH--
XP_008180459_Acyrtosiphon_pisum LHYPN-----SCP-QSQFL-CHDKTKCLDKKXHMCDIKNDCSDGSDE--
UPI000252AABD_Apis_florea   EDFHWS-----ICKHQDQFR-CKNGE-CISKSKYCNSHYDCSDRSDE--
UPI0001758603_Tribolium_castaneum KELN-----HCF-WNNFQ-CHDGE-CIDERPKCDYKFCDCRDKSDE--
T1KD20_Tetranychus_urticae  PPPDCEIYKQSSISFNE-NAEFIRCNRTPICIHPBWIQDAQNDCLDWSDE--
UPI0002063B8E_Apis_mellifera EDFHWS-----TKHQDQFR-CKNGE-CISKSNYCNSHYDCADRSDDE--
E2FLQ4_Bombyx_mori          THITKQ-----PESQCE-PNEIL-CYG--LCVAK---DSSPSPSPATHSD

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LDLa

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Bemisia_tabaci_Asia_1      ANC-----QNVTCQDSY----NFLCR-TGECVSHAVLCNNEWNCKDGDG--
T1E9W2_Anopheles_aquasalis ANCDGY--VWHEGCRRES----QFTCA-NGLCIDANGRCDDGYADCRDGDG--
P98163_Drosophila_melanogaster QHCEKF--DKSKKCHVH----QHGCN-NGKCVDSLSVCDGTNDCGDN--
B4Q2Q9_Drosophila_yakuba   QHCEKF--DKTKKCHVH----QHSN-NGKCVDSLSVCDGTNDCGDN--
B4IGA9_Drosophila_sechellia QHCEKF--DKNKKCHVH----QHGCN-NGKCVDSLSVCDGTNDCGDN--
K4MUW4_Actias_selene      SAVADLTLPLKCDWN----QFTCKESPVCISRSLLCDGAKDCPDG--
Q1T728_Rhyarobia_maderae  KNC-----QKCEET----DFQCR-TGECIDILDRCDLVPDCRDA--
O76952_Aedes_aegypti      MKCEGY--DRGTGCHHE----QHACP-DGMCIDVNTLCDGFFDCDGDG--
Q6X0I2_Solenopsis_invicta QNC-----EKFKCSN----EFQCKFTECIPKTKMCDSNPDCDLDL--
ADE34166.1_Nilaparvata_lugens LGCDSSRAPEDGRAQPNIPVCEFRCSNNECVSEARCDLQPCDSDG--
D5KXW4_Nilaparvata_lugens LGCDSSRAPEDGRAQPNIPVCEFRCSNNECVSEARCDLQPCDSDG--
BAC02725_Periplaneta_americana YYC-----FEEECNEDL----QFKCR-TGDCIVKSWYCDGSKDCEDG--
ADM34986.1_1_B tabaci_B    ANC-----QNVTCQDSY----NFLCR-IGECVSHAVLCNNEWNCKDGDG--
CAJ19121_Blattella_germanica KNC-----EKCEAI----QFKCS-SGECVDIHDRCDHYPDCTDGDG--
H2CLV8_Antheraea_pernyi   SAVADLTTPLPKCDWN----QFTCKESPVCISRSLLCDGAKDCPDG--
XP_008180459_Acyrtosiphon_pisum MDC-----LHKHTCDST----EYQCT-SGECIQRIPLCDGNPDCING--
UPI000252AABD_Apis_florea  EGC-----VKKEY----EFQCH-EGACISKYLVCGNYNDCDLDL--
UPI0001758603_Tribolium_castaneum RNCSS--IDAKKCPFG----HFMCK-SGQCINERLVCDGVKDCLEE--
T1KD20_Tetranychus_urticae ANCAPKYNNNGTCDPN----WFQCK-TGLCIPKAWKCDRDNDVNTENT--
UPI0002063B8E_Apis_mellifera EGC-----VKKEDSN----EFQCH-EGACISKYLVCGNYNDCDLDL--
E2FLQ4_Bombyx_mori       LTT-----PPLKCDWI----QFSCKESPVCISRSLLCDGAKDCPDG--

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Bemisia_tabaci_Asia_1      ---SDE--ENC-----TTSTCPSN-EFRCHSGTCIPKKN
T1E9W2_Anopheles_aquasalis ---SDE--LGCCKPIAGSNSSSSSNGNGNGTTVTCAPH-MFRGNSSGQCLPRS
P98163_Drosophila_melanogaster ---SDE--LLEATSRCRCEEG-MEQCGSGSACIAGS
B4Q2Q9_Drosophila_yakuba   ---SDE--MLLEATSRCRCEEG-MEQCGSGSACIAGT
B4IGA9_Drosophila_sechellia ---SDE--LLEATSRCRCEEG-MEQCGSGSACIAGS
K4MUW4_Actias_selene      ---SDEGPDNCDTLACFDT-EFMCASGSCILKT
Q1T728_Rhyarobia_maderae  ---SDE--ENC-EGVTCRCEEG-HYRCVVGVCIPYT
O76952_Aedes_aegypti      ---SDE--VGC-----TDLTNEKSNATTGGL-MFRGNMGQCIPIKW
Q6X0I2_Solenopsis_invicta ---SDE--EDCRKVECTSN-EFKGNNGACIPNT
ADE34166.1_Nilaparvata_lugens ---SDE--LGCDAHLCDKTAQFRCRSGACIAAE
D5KXW4_Nilaparvata_lugens ---SDE--LGCDAHLCDKTAQFRCRSGACIAAE
BAC02725_Periplaneta_americana ---SDE--ENC-EEVTCRCEEG-AFKGALGQCIPEE
ADM34986.1_1_B tabaci_B    ---SDE--ENC-----TTSTCPSN-EFRCHSGTCIPKKN
CAJ19121_Blattella_germanica ---SDE--SNENVSCEPT-DEFRGHIVGVCIPKY
H2CLV8_Antheraea_pernyi   ---SDEGPDNCDTLACFDT-EFMCASGSCILKT
XP_008180459_Acyrtosiphon_pisum ---QDE--LNC-ENQSCNNTTEFRGNSSGNCIPAT
UPI000252AABD_Apis_florea  ---SDE--LNC-NKHKCDND-SFACEIGTCIPKT
UPI0001758603_Tribolium_castaneum ---EDE--ANC-VSTVCKDY-EFRQSGACIPKN
T1KD20_Tetranychus_urticae TVTSDE--QDC--TYKCHDD-QFQGNNDQDIPAD
UPI0002063B8E_Apis_mellifera ---SDE--LNC-NKHKCDND-SFACEIGTCIPKT
E2FLQ4_Bombyx_mori       ---SDEGPDNCDTLACFDT-EFMCASGSCILKT

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LDLa

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Bemisia_tabaci_Asia_1      WVCDDLADACPDQSDDE--NNCSEFRKEKCT-E--FLC-QSGM-CVAQELVVCN
T1E9W2_Anopheles_aquasalis WECGTPTDCTDSSDE-HSQCHNSEKTTCTR-PGYHTCLASGVCIEGSLVCD
P98163_Drosophila_melanogaster WECGRIDCSDDGSDE-HDKCVH--RSCP-PDMQRC-LIGQCLDRSLVCD
B4Q2Q9_Drosophila_yakuba   WECGRIDCSDDGSDE-HDKCAH--RSCP-PDMHRC-LIGQCLDRSLVCD
B4IGA9_Drosophila_sechellia WECGRIDCSDDGSDE-HDKCVH--RSCP-PDMLRC-LIGQCLDRSLVCD
K4MUW4_Actias_selene      WKCDGDQDCNDASDE--IDCES--VSC-PGYYQC-RDRBCIELLKRCD
Q1T728_Rhyarobia_maderae  WVCDDGSDCVDGSDE-KD-CSP--ITCD-AGSFS-CNFRGIDRHLVCN
O76952_Aedes_aegypti      WECGNDPDCDGSDE-HDKCLT--KTDCG-AGFTKC-ALGHCIEDRLLCD
Q6X0I2_Solenopsis_invicta FVCDNDNDCEDEAAEKYS--KIACKMPKMFKC-FNGBCISDSLVCN
ADE34166.1_Nilaparvata_lugens LECNGEMDCRDASDE-HAKCNH--VRTCS-PNQITC-MNGQCIDKELKCN
D5KXW4_Nilaparvata_lugens LECNGEMDCRDASDE-HAKCNH--VRTCS-PNQITC-MNGQCIDKELKCN
BAC02725_Periplaneta_americana WVCDDGSDCVDDDTDE--QNCAP--PTCG-PGAFSC-GNGRCIDQTLVCN
ADM34986.1_1_B tabaci_B    WVCDDLADACPDQSDDE--NNCSEFRKEKCT-E--FLC-QSGM-CVAQELVVCN
CAJ19121_Blattella_germanica WVCDDGEPDCTDGTDE--LNCAP--ITCG-PDLFSC-MNGRCVDKLLVCN

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H2CLV8 <i>Antheraea pernyi</i>	WKCDGDQVCNDASDE--IDCES--VSK-PGYYQC-RDRECIELKRC
XP_008180459 <i>Acyrtosiphon pisum</i>	WECDEGEVDCFDGSDE-HYSGAT--KKCK-DDQFSC-TNGRCISHKFTCN
UPI000252AABD <i>Apis florea</i>	WKCDGEVDCFDGSDE-SETGQR--KKCP-SEMFTC-FNGRCIDLILKCN
UPI0001758603 <i>Tribolium castaneum</i>	WECDDHYDCPDFSDE-HSGCA--SCD-ASTFTC-NNGKCIDKSFVCD
T1KD20 <i>Tetranychus urticae</i>	WKCDGHNDCCDNDSDENPEVCS--KVCP-HDYFNC-TSGQCIPLYWVCD
UPI0002063B8E <i>Apis mellifera</i>	WKCDGEVDCFDGSDE-SEIGQR--KKCS-SEMFTC-FNGRCIDLILKCN
E2FLQ4 <i>Bombyx mori</i>	WKCDGDQVCNDASDE--IDCES--VSK-PGYYQC-RDRECIELKRC

LDLa

<i>Bemisia tabaci</i> Asia_1	GQTECD--GSDE--FNCDEPVPKTANKEDGFIDN--CDEEKE-----
T1E9W2 <i>Anopheles aquasalis</i>	GNDDCGD--GSDE--ESC SHHEQQDTI-----CAHPDKANASL
P98163 <i>Drosophila melanogaster</i>	GHNDCCGD--KSDE--LNC GTSSTMNIS-----CAED-Q-----
B4Q2Q9 <i>Drosophila yakuba</i>	GHNDCCGD--KSDE--LNC GTSSTVNI S-----CAED-Q-----
B4IGA9 <i>Drosophila sechellia</i>	GHNDCCGD--KSDE--LNC GTSSTVNI S-----CAED-Q-----
K4MUW4 <i>Actias selene</i>	GHQDCFD--YSDE--EECDEPVAVEEPKIHRR-----CAWE-E-----
Q1T728 <i>Rhyarobia maderae</i>	GDNDCCGD--YSDE--MECKRPTMVV-----CQPT-E-----
O76952 <i>Aedes aegypti</i>	GNNDCGD--NSDE--LNC KVELEP-----CVGLEDDNPTK
Q6X0I2 <i>Solenopsis invicta</i>	GINDCND--GSDE--VHCLSNVTTHLVN-----CSLN-E-----
ADE34166.1 <i>Nilaparvata lugens</i>	GRNDCCD--ASDE--QSC PQRPIAHIPVFANTGASSPECDTRFE-----
D5KXW4 <i>Nilaparvata lugens</i>	GRNDCCD--ASDE--QSC PQRPIAHIPVFANTGASSPECDTRFE-----
BAC02725 <i>Periplaneta americana</i>	NVDDCCGD--RSDE--DPC RKPANEEERLSVIL-----CKEG-E-----
ADM34986.1_1_B <i>tabaci</i> _B	GQTECD--GSDE--FNCDEPVPKTANKEDGFIDN--CDEEKE-----
CAJ19121 <i>Blattella germanica</i>	HNDCCGD--SSDE--ITCKHASSVV-----CAQT-E-----
H2CLV8 <i>Antheraea pernyi</i>	GHQDCFD--YSDE--EECDEPVAVEEPKIHRR-----CAWE-E-----
XP_008180459 <i>Acyrtosiphon pisum</i>	GKDDCCGD--SSDE--NGCSSNHAYMTKRVSQV-----CNEKTE-----
UPI000252AABD <i>Apis florea</i>	GISECED--DSDE--KYCNDKSTNNYVN-----CTAD-E-----
UPI0001758603 <i>Tribolium castaneum</i>	KENDCCD--NSDE--LSCVMENS-----CDLS-E-----
T1KD20 <i>Tetranychus urticae</i>	GEIDCHDANGSDENLPEGCNFK-----CKFN-E-----
UPI0002063B8E <i>Apis mellifera</i>	GISECED--DSDE--KYCNDKRNNNIN-----CTAD-E-----
E2FLQ4 <i>Bombyx mori</i>	GHQDCFD--YSDE--EECDEPVVVEEPKIHRR-----CAER-E-----

LDLa

<i>Bemisia tabaci</i> Asia_1	FMCEPG----KCNILIFKCN GAKDCENGADE-LNC-IG-CE--Q-FTCN
T1E9W2 <i>Anopheles aquasalis</i>	FYCTRSS----HCFDASARCN GTAECPHGEDE-TDC-PG-CAHQE-FACA
P98163 <i>Drosophila melanogaster</i>	YQCTSNLK---ICLPS TVRCNGTTECPRGEDE-ADC-GDVC-SIYE-FKCR
B4Q2Q9 <i>Drosophila yakuba</i>	FQCTSNLK---ICLPS AVRCNGTTECPRGEDE-ADC-GDVC-SIYE-FKCR
B4IGA9 <i>Drosophila sechellia</i>	FQCTSNLK---ICLPS AVRCNGTTECPRGEDE-ADC-GDVC-SIYE-FKCR
K4MUW4 <i>Actias selene</i>	YSCERNRS---ICLPI TARCNMKTDCPGGTDE-IGC-DYRCTPHGMFGCK
Q1T728 <i>Rhyarobia maderae</i>	IPCLSHNKTVI SCVPS SARCN DVAECP LGDE-RAC-DK-CLDFQ-FRCS
O76952 <i>Aedes aegypti</i>	YLCPRSG----KCLDI AVRCNGTAECPDGEDE-AGC-SN-CGLQE-FQCK
Q6X0I2 <i>Solenopsis invicta</i>	YRCLGTD----ICLPKNVRC D GKNDCPQSDDE-QNC-TY-CFENE-FACD
ADE34166.1 <i>Nilaparvata lugens</i>	FECERG----HCIPSSARCN HTSECSNGRDE-LNC-MG-CHHDQ-FQCK
D5KXW4 <i>Nilaparvata lugens</i>	FECERG----HCIPSSARCN HTSECSNGRDE-LNC-MG-CHHDQ-FQCK
BAC02725 <i>Periplaneta americana</i>	YTCBPHGKNVT ICLPS SGRCN GTAECP LGDE-RGC-G--QDFQ-FTCY
ADM34986.1_1_B <i>tabaci</i> _B	FMCEPG----KCNILIFKCN GVKDCENGADE-LNC-IG-CE--Q-FTCN
CAJ19121 <i>Blattella germanica</i>	ITCTSHNKSVI SCVPS SARCN DIPDCP LGDE-RGC-EK-CMDFQ-FKCN
H2CLV8 <i>Antheraea pernyi</i>	YSCERNRS---ICLPI TARCNMKTDCPGGTDE-IGC-DYRCTPHGMFGCK
XP_008180459 <i>Acyrtosiphon pisum</i>	FECENTMG---HCIP I KRCNGTSECKHLEDE-LNC-G--CQKSNFECQ
UPI000252AABD <i>Apis florea</i>	YKCFDSD---ICLPKQFRCDGIKNC PKNDDE-RDC-AR-CNEAE-YVCE
UPI0001758603 <i>Tribolium castaneum</i>	FSCSLHHTH---ICLPD SARCN GTSECPHHEDE-QNC-SN-CQVDE-FSCN
T1KD20 <i>Tetranychus urticae</i>	FSCKNH----QCILKFKFYCDGDDDCGD KSDPEPNCRSSKCLSDQ-FECM
UPI0002063B8E <i>Apis mellifera</i>	YKCFDSD---ICIPKRFRCDGIKNC PKNDDE-RDC-AR-CNEAE-YVCE
E2FLQ4 <i>Bombyx mori</i>	YSCERNRS---ICLPI TARCNMKTDCPGGTDE-IGC-DYRCTPHGMFGCK

LDLa

<i>Bemisia tabaci</i> Asia_1	NGK-CITYDLV CNDDDCGDSSDERPLNSCPD SKENPAIVPAHIP-NVCH
T1E9W2 <i>Anopheles aquasalis</i>	NGQ-CIPREWRCKELDCADGSDEW NCTVTD RGT HES PQH-----JLCA
P98163 <i>Drosophila melanogaster</i>	SGRECIREFRCDGQKDCGDGSDELSCELEKGNHNQSQIQPWSTSSRSCR
B4Q2Q9 <i>Drosophila yakuba</i>	SGRQCIREFRCDGQKDCGDASDELSCELEKGNRNQSQIQPWSTSSRACR
B4IGA9 <i>Drosophila sechellia</i>	SGRECIREFRCDGQKDCGDGSDELSCELEKGNHNQSQIQPWSTSSRACR
K4MUW4 <i>Actias selene</i>	QQIRCLAMNRC DGNK EYDNGSDETPDACA LVNRTSHLYPVMLYPAAECR
Q1T728 <i>Rhyarobia maderae</i>	NGR-CIPQEWTC D KTD DDCDGSDEDPVLCHEHSTQQST-----P-GPCR
O76952 <i>Aedes aegypti</i>	SGK-CIRKEWRCDKEVDCDDGSDEVD CVNGTAAEHLEHV-----VACG
Q6X0I2 <i>Solenopsis invicta</i>	NKR-CIPELWCKANDCGD NSDEKNC DGSKRNFIES-----NEC-
ADE34166.1 <i>Nilaparvata lugens</i>	NER-CIYHTWVCDKKNDCGD NSDEEALCKTRKGNADQSVATKSD-TRCF
D5KXW4 <i>Nilaparvata lugens</i>	NER-CIYHTWVCDKKNDCGD NSDEEALCKTRKGNADQSVATKSD-TRCF
BAC02725 <i>Periplaneta americana</i>	NGK-CIPSEWVCDGINDCGDGSDENNARCQLPSSVGTB-----GPCT
ADM34986.1_1_B <i>tabaci</i> _B	NGK-CITYDLV CNDDDCGDSSDERPLNSCPD SKENPAIVPAHIP-NVCH
CAJ19121 <i>Blattella germanica</i>	DGR-CIYFEDWCTDKDCADGSDENQMHCSQSVETGT-----P-GPCT
H2CLV8 <i>Antheraea pernyi</i>	QQIRCLAMNRC DGNK EYDNGSDETPDACA LVNRTSHLYPVMLYPAAECR
XP_008180459 <i>Acyrtosiphon pisum</i>	NKR-CVLKDWLCKHDDCGDGSDESQKACDMLSEHLSNSVSS--KDCD

UPI000252AABD_Apis_florea NKK-CIEKSWVCDRVDGCGDGSDEERNCDGSNWRNTNSVSMI-----RNC K
 UPI0001758603_Tribolium_castaneum NTK-CIPREWICDHSDDCGDGSDEVESLNCNHTIPEHATN-----FSCI
 T1KD20_Tetranychus_urticae NKK-CIEKSLWICNGBVDFCPGSGDESDDLRCNNNNTS--- --NLCP
 UPI0002063B8E_Apis_mellifera NKK-CIEKSWVCDRIDDCGDSDEERNCDGSNWKMNSISMV-----SNCK
 E2FLQ4_Bombyx_mori QQIRCLAMNRVCDENKEDDGSDETFDACAALVNRRTSHLYPVMLYPAAECR

LDLa

Bemisia_tabaci_Asia_1
 T1E9W2_Anopheles_aquasalis -G-FVCKN--GECLDDFSLVCNKKQDKDGSDEGGRCGSSCDVTAN--C
 P98163_Drosophila_melanogaster VDEFECSA--GECV-DVALCDGKADCSNGRDEGASCSSACPGGRGP--C
 B4Q2Q9_Drosophila_yakuba PHLFDQD--GECV-DLSRVCNNFPDCTNGHDEGPKCATA CRSASGRQVC
 B4IGA9_Drosophila_sechellia PHLFDQD--GECV-DLSRVCNNFPDCTNGHDEGPKCATA CRSASGRQVC
 K4MUW4_Actias_selene -DGFLCGN--GQCI-EWABVCDRTFNCFDGSDESIHCFSA CDNNT---C
 Q1T728_Rhyparobia_maderae -E-YSCKN--GDCI-SMSFVCDGRKDCSDGSDEGGLCDSSCLGKDP--C
 O76952_Aedes_aegypti EGTFECKP--GVCIE-MSQVCGNGKDCDDGKDEGKGCDDACAKSP---C
 Q6X0I2_Solenopsis_invicta -DEFKCSV--GTCL-PYSKVCNDRDCEFDGSDEITGKCCQTA CTVNF--C
 ADE34166.1_Nilaparvata_lugens -GSFRCADSASECI-HTDKVCNNEKDCSDGSDEGGMCDKGCESAG---C
 D5KXW4_Nilaparvata_lugens -GSFRCADSASECI-HTDKVCNNEKDCSDGSDEGGMCDKGCESAG---C
 BAC02725_Periplaneta_americana -D-YACND--GQCI-SLSIACNKRNCEDGSDEGGQCDIACNAKSP---C
 ADM34986.1_1_B_tabaci_B -G-FVCKN--GECLDDFSLVCNKKQDKDGSDEGGRCGSSCDVTAN--C
 CAJ19121_Blattella_germanica -E-YSCDN--GACV-DLSLVCNQRQDCSDGSDEGGMCDKGCESAG---C
 H2CLV8_Antheraea_pernyi -DGFLCGN--GQCI-EWABVCDRTFNCFDGSDESIHCFSA CDNNT---C
 XP_008180459_Acyrthosiphon_pisum -G-YLCKN--QECIE-PLDQACNKKINCEDGSDEGDLGGLS CIHMD---C
 UPI000252AABD_Apis_florea -E-FKCSN--GTCL-PFNKVCNDRDCEFDGSDEITGKCCQTA CTVNF--C
 UPI0001758603_Tribolium_castaneum -DRFRCRN--GNCI-DLSLVCNKEPCNCDGSDEEGLCNCSALNNP--C
 T1KD20_Tetranychus_urticae ADNFDQCAN--GNCV-LPDVLCNDRDCEFDGSDEITGKCCQTA CTVNF--C
 UPI0002063B8E_Apis_mellifera -E-FKCSN--GTCL-PFNKVCNDRDCEFDGSDEITGKCCQTA CTVNF--C
 E2FLQ4_Bombyx_mori -DGFLCGN--GQCI-EWABVCDRTFNCFDGSDESIHCFSA CDNNT---C

EGF

Bemisia_tabaci_Asia_1
 T1E9W2_Anopheles_aquasalis SQICRDKPFGNGHECACVPGFKIAEDGRDCEIDIDEC TELEP- CSQMCFNITYG
 P98163_Drosophila_melanogaster TQKCTKTPAGAVCSCEGAYALQGDGRKSCADLNECQTGTTP-CAQICANVPG
 B4Q2Q9_Drosophila_yakuba QHKCRATPAGAVCSCEGAYALQGDGRKSCADLNECQTGTTP-CAQICANVPG
 B4IGA9_Drosophila_sechellia QHKCRATPAGAVCSCEGAYALQGDGRKSCADLNECQTGTTP-CAQICANVPG
 K4MUW4_Actias_selene AHACQATPLGPRCLCPAGYSAAPDRRTCADVDECRAG-L-CSQACVNTPG
 Q1T728_Rhyparobia_maderae EDICLKTTPRGPRCKCSHGFPALLSDGSRCCQDIDEC DM-QA-CAQVCHNKP
 O76952_Aedes_aegypti EHKCIKTPGTGATCCREGEFTLAPNKKSCLDVDECAEGRP-CAQQCRNTFG
 Q6X0I2_Solenopsis_invicta KGMCYKTPAGAVCSCEGAYALQGDGRKSCADLNECQTGTTP-CAQICANVPG
 ADE34166.1_Nilaparvata_lugens SDTCQRTPHGPKCCQGFELSGDAKTCVDIDECATEEY-CSQYCSNTPG
 D5KXW4_Nilaparvata_lugens SDTCQRTPHGPKCCQGFELSGDAKTCVDIDECATEEY-CSQYCSNTPG
 BAC02725_Periplaneta_americana DQICQPTLAAQDANVHKGYVLS SDGAKCGDIDEC EIGGA-CAQVCHNTRG
 ADM34986.1_1_B_tabaci_B SQICRDKPFGNGHECACVPGFKIAEDGRDCEIDIDEC TELEP- CSQMCFNITYG
 CAJ19121_Blattella_germanica QQVCMKTPRPGQCCCKGFKLLNGAKCQDINECESQ-V-CAQVCHNTPG
 H2CLV8_Antheraea_pernyi AHACQATPLGPRCLCPAGYSAAPDRRTCADVDECRAG-L-CSQACVNTPG
 XP_008180459_Acyrthosiphon_pisum SHTCQETPKGGKCCREGEYKLAQDGITCRDINECEDDNL-CTQYCTNSDG
 UPI000252AABD_Apis_florea TNMCHKTPTPGVCRCRNGYHLSNDLKTCEIDIDEC KKN-V-CSQICHNTNG
 UPI0001758603_Tribolium_castaneum SQICVKTPTGPTKCCQGGYQLRGDGHTCEIDINECAEHPVPSQICHNSEG
 T1KD20_Tetranychus_urticae SQICEDMPTIGYKCCSHAGFEAIDGKIDCEIDIDEC KVDPR-CSQICRNTYG
 UPI0002063B8E_Apis_mellifera TNMCHKTPTPGVCRCRNGYHLSNDLKTCEIDIDEC KQN-I-CSQICHNTNG
 E2FLQ4_Bombyx_mori AHACQATPLGPRCLCPAGYSAAPDRRTCADVDECRAG-L-CSQACVNTPG

Calcium binding EGF

Bemisia_tabaci_Asia_1
 T1E9W2_Anopheles_aquasalis SYTCACLGPDYIKKSDG-SCKATGP-KLQYVFATGYQIRTISYLMTD-VK
 P98163_Drosophila_melanogaster SYRCS-CYDGYMLKPDKMTCKATGA-NYIILYARYDKVRKFEIKPPT-VT
 B4Q2Q9_Drosophila_yakuba GYQCQC-HADFMLRQDRVSCKSLQS-GATLLFSSFNEVRNLSEQPVM-LN
 B4IGA9_Drosophila_sechellia GYQCQC-HADFMLRQDRVSCKSLQS-GATLLFSSFNEVRNLSEQPVM-LN
 K4MUW4_Actias_selene SFLCSC-HHGYALRSDRRSCKAVTG-NMSILYVSGNTVRSVSDGYG--A
 Q1T728_Rhyparobia_maderae SFSCAC-DPGFELRSDRISCKAVGR-GKEFLFVTGKEIRRVTHELRF-VK
 O76952_Aedes_aegypti SYRCS-CNPGFMLRSDKISCKAVGP-SRYVLYTSYNQIRKLEVNPPS-IR
 Q6X0I2_Solenopsis_invicta SYECFC-KDEFIIRNDKTSCKAVGP-AMEFITVTDNDIRKMTNHLSTTQ
 ADE34166.1_Nilaparvata_lugens AFRCSCKAPEYVLRNMGSCAKGG-EMQFIYSVYNEIRTMSGWHSY-LG
 D5KXW4_Nilaparvata_lugens AFRCSCKAPEYVLRNMGSCAKGG-EMQFIYSVYNEIRTMSGWHSY-LG
 BAC02725_Periplaneta_americana SFSCSC-HPGFQLRSDHVSCKALGE-PMQFIFSAAGNQIRKVSHELRF-TD
 ADM34986.1_1_B_tabaci_B SYTCACLGPDYIKKSDG-SCKATGP-KLQYVFATGYQIRTISYLMTD-VK
 CAJ19121_Blattella_germanica SFSCIC-DAGFELRSDRISCKAIGK-AKEFIFVADKQIRRVTHELRF-MK
 H2CLV8_Antheraea_pernyi SFLCSC-HHGYAPRSDRRSCKTVTG-NMSILYVSGNTVRSVSDGYG--A
 XP_008180459_Acyrthosiphon_pisum SYSCSCLNSDIYLRADKSSCKAIGP-TMDLVYVSGVDEIRSTGDIKE-SK
 UPI000252AABD_Apis_florea SFTSCC-YEGYVIRSDKTSCKVAGS-QMEIITVSGVDIRKLSPLNLS-IE
 UPI0001758603_Tribolium_castaneum SYSCDC-YEGFALRTDRSCKAKGT-AMSLIFSSNNQIREISQLENS-LK

T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

SYS CSC - VPGYYSANNGS SCKANS D I E P Y L L F A D R Y S I A Y S D L K G H N - L R
 S F I C S C - Y E G Y V I R S D K T S C K V A G S - Q M E I I I V S D T H I R K L S S N L N S - I E
 S F L C S C - H H G Y A L R S D R R S C K A V T G - N M S I L Y V S G N T V R S V S A D G Y G - - A

Bemisia_tabaci_Asia_1
 T1E9W2_Anopheles_aquasalis
 P98163_Drosophila_melanogaster
 B4Q2Q9_Drosophila_yakuba
 B4IGA9_Drosophila_sechellia
 K4MUW4_Actias_selene
 Q1T728_Rhyarobia_maderae
 076952_Aedes_aegypti
 Q6X0I2_Solenopsis_invicta
 ADE34166.1_Nilaparvata_lugens
 D5KXW4_Nilaparvata_lugens
 BAC02725_Periplaneta_americana
 ADM34986.1_1_B_tabaci_B
 CAJ19121_Blattella_germanica
 H2CLV8_Antheraea_pernyi
 XP_008180459_Acyrthosiphon_pisum
 UPI000252AABD_Apis_florea
 UPI0001758603_Tribolium_castaneum
 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

V A Y Y S A D L - - E V S G F D V N M R T E H V Y W S - S E N K G V I T K M S L T H R H E P K H F -
 T L A R A T S S - - R I T S M D A N M H Q G K L Y Y T - A E N T S A I F E T D L M - G N E S R I V -
 V A W S A N D S - - R I T G F D L A M H R Q M G Y F S - A E D E G I V Y Q I D L - - - Q T K V I -
 V A W S A N D S - - R I T G F D V D M H R Q M G Y F S - A E D E G I V Y Q V D L - - - Q T K L I -
 V A W S A N D S - - R I T G F D L D M H R Q M G Y F S - V E D E G I V Y Q I D L - - - Q T K V I -
 I E Y S D P D L - G D I T D L D F N V R T K R L Y V T - S T E S G K L I E L N V - - - T H D V V A -
 V A Y P D N D F - - Q V T G L D A D S Q L O M V Y W S - V G A A N A I F S M S L - - I G G K K T Q -
 I L M Q A N G S - - R I T S M D V D I R R Q M L Y F T - D E Y N P V I Y E H D M - - E R N T T H V -
 L L F P L M G V - - R V S G L D V N A V S D S V Y W S - N D E F P G T I K K L N I - - R T N E I V T -
 I V H S D P D Y R A R V A G L T A D V A R K H V Y W T - T T T N D S V F Q I S M - - - D N R R M -
 I V H S D P D Y R A R V A G L T A D V A R K H V Y W T - T T T N D S V F Q I S M - - - D N R R M -
 V V Y P E A E L - - K V T G L D V D S A S N E V Y W S - T D V T S T I Y R L S L - - R G E T K A Y -
 V A Y Y S A D L - - E V S G F D V N M R T E H V Y W S - S E N K G V I T K M S L T H R H E P K H F -
 I A Y L D Y D F - - K V T G L D V D S K L G M V Y W S - S D E T N T I Y R M S L - - I G G T K A Y -
 I E Y S D P D L - G D I T D L D F N V R T K R L Y V T - S T E S G K L I E L N V - - - T H D V V A -
 L I F S M P G M - - T I S S L D I D I R N L I Y W T - S K Q A G V L I C M D M - - Q Q H K F Y -
 L I Y K E V D F - - E I N G I D V N T R E D T I Y W S - N E M L G M I N K I H V - - K T K E R K T -
 M L Y S E E T P - - R I T S L D V G L T S G A I Y F T - V E N S N A I L K I N K - - G D T K R E Y -
 L K V H N L T - - - N A I G L D F D W E E K C I Y W S E V S Q A G S S I N K A C S K D H N D T L L P
 F I Y K E I D F - - E I N G I D V N T R E D T I Y W S - N E M L G M I N K I H V - - K T K E R K T -
 I E Y S D P D L - G D I T D L D F N V R T K R L Y V T - S T E S G K L I E L N V - - - T H D V V A -

LDLb

Bemisia_tabaci_Asia_1
 T1E9W2_Anopheles_aquasalis
 P98163_Drosophila_melanogaster
 B4Q2Q9_Drosophila_yakuba
 B4IGA9_Drosophila_sechellia
 K4MUW4_Actias_selene
 Q1T728_Rhyarobia_maderae
 076952_Aedes_aegypti
 Q6X0I2_Solenopsis_invicta
 ADE34166.1_Nilaparvata_lugens
 D5KXW4_Nilaparvata_lugens
 BAC02725_Periplaneta_americana
 ADM34986.1_1_B_tabaci_B
 CAJ19121_Blattella_germanica
 H2CLV8_Antheraea_pernyi
 XP_008180459_Acyrthosiphon_pisum
 UPI000252AABD_Apis_florea
 UPI0001758603_Tribolium_castaneum
 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera
 E2FLQ4_Bombyx_mori

- - - - - I T G L R - - R P S E L A V D W I T H N L Y F V Q - - - A R N T I N V C N F H L E R C A
 - - - - - L R S V G - - K P E K L A V D W V A N N V Y F I D G - - S E P S I K V C S I G R A N C A
 - - - - - V R A L G L P A P T K L S V D W V T G N V Y V L S - - - G A Q E I Q A C S F V G R M C G
 - - - - - T R A L G L P T P T K L S V D W V T G N V Y V L S - - - G A Q E I Q A C S F E G R M C G
 - - - - - V R A L G L P A P T K L S V D W A T G N V Y V L S - - - G A Q D I H A C S F V G R M C G
 - - - - - V T N V G - - R P T R V A V D W V T G N V Y F A D S T P G A S C V R V C D V T R R R C A
 - - - - - M K G I G - - N P A D I A V D W I T H N V Y Y I D K D - A I Q T I K V C N L D D Q L H A
 - - - - - L Y N V G - - H P E H L A V D W I T G N V Y F Y D R - - S E P S I K L C S V Q R Q L C S
 - - - - - V K I V E - - H P Q A L A V D W I T G N V Y V N D N S - H L N T I K V C N L E K Q K C A
 - - - - - I R S A H I I R P S R L A I D W I T G N V Y V V E - - - A A T Q I T A V N F E K R T H A
 - - - - - I R S A H I I R P S R L A I D W I T G N V Y V V E - - - A A T Q I T A V N F E K R T H A
 - - - - - A T G I G - - T P G D I A V D W I S R N V Y Y V D K S - T P Q A I R A C N L D E H R C A
 - - - - - I T G L R - - R P S E L A V D W I T H N L Y F V Q - - - A R N I I N V C N F H L E R C A
 - - - - - L T G I G - - S P T D I A L D W I T G N V Y Y V D K D - T I Q S I K V C N L D S Q Q H A
 - - - - - V T N V G - - R P T R V A V D W V T G N V Y F A D S T P G A S C V R V C D V T R R R C A
 - - - - - M T D L L - - H P T L V R I D W L T G N V Y F V Q - - - N F K D I V V C Y L N A K R C A
 - - - - - V T G L G - - R P E A L A V D W I T G N V Y F N D N D - Y T S S I Q V C N L E Q K K C A
 - - - - - L E N V G - - Q P C K I T L D W R T N N I Y Y F N N A P T T K S I G L C N F N D K T C A
 P S S V V K I H T V H I Q S P D G L A V D W F A K N L Y W S D K - - G R T I E V S K L D G S F R K
 - - - - - V T G L G - - R P E A L A V D W I T G N V Y F N N D - Y S S I E V C N L E Q K K C A
 - - - - - V T N V G - - R P T R V A V D W V T G N V Y F A D S T P G A S C V R V C D V T R R R C A

LDLb

Bemisia_tabaci_Asia_1
 T1E9W2_Anopheles_aquasalis
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 UPI000252AABD_Apis_florea
 UPI0001758603_Tribolium_castaneum
 T1KD20_Tetranychus_urticae
 UPI0002063B8E_Apis_mellifera

Q I I T A E S G L E I N S L A V D P V R G V L F W S E T S R I V W N M P K S T I R R A D M N G K N I
 R L V T F M R Q N F L K A L C V D P V N S T -
 R I V H V K S P R H V K H L A V D G Y H A R I F Y I V I R T E G Y Q T S S E I H M A R L D G S R R
 R I V H V K S P R H V K H L A V D G Y H A R I F Y I V I R T E G Y Q T S S E I H M A R L D G S R R
 R I A H V K S P R H V K H L A V D G Y H A R I F Y I V I R T E G Y Q T S S E I H M A R L D G S R R
 R L Q K I P S D A T V K A L I V E P A S R R M F Y C - - - - V Q R G H S V V W S A S L S G R S A
 K V M D V S N G F S A S R L A V D P F H G F L F W V E V N K W R I D V P A S V L L R A D M N G E N R
 R I I T F A S Q V F V K A V V D P V N R L L F Y S L M H F W I F Q V P H S I I Y R A D M D G Q N Q
 T L V K I Q D K M K V A S V I V D S I N R W L F W A E I S L E A - D H P T S K I C R T D M T G A D M
 R L Y K S D P A K D I E A L A V D P V T R T M F W S E - - R L A H K I Q F S A I Y R A D T S G S G L
 R L Y K S D P A K D I E A L A V D P V T R T M F W S E - - R L A H K I Q F S A I Y R A D T S G S G L
 K V L V I E H G F S V P K I A V D P I A G F I F W P E V T K W V F G E P S T D L F R S E L T G R H K
 Q I I T A E S G L E I N S L A V D P V R G V L F W S E T S R I V W N M P K S S I R R A D M N G K N I
 T V V H V D S G Y S A S R I A V D P F A G F I F W I E I S T W N I E I P K S I L I R A D M S G E N R
 R L Q K I P S D A T V K A L I V E P A S R R M F Y C - - - - V Q R G H S V V W S A S L S G R S A
 T I Y S A N I H T T I M A F E I D P R S G V M F W S E T I W A V F S T P T I I R K S D C S G Y N V
 K I V S I A G K N R V I S I A V E P K K G W L F W S Q T S W A F Y D R P M S K I Y R S N T M G N N A
 N L I P V D T H R Q V S A L V D P I N N V L F Y S L V S W W I F N S P S Y I Y K T N L D G T G G
 I L L K D D L Q L B - R A I A L D P S E G Y M Y W T D - - - - W G E N Y - I G K S M D G S N G
 K I V S I A G K N H V I S I A V E P R K G W L F W S Q T S W A F Y D R P M S K I Y R S N T M G N N A

LDLb

Bemisia tabaci Asia 1
T1E9W2_Anopheles_aquasalis
P98163_Drosophila_melanogaster
B4Q2Q9_Drosophila_yakuba
B4IGA9_Drosophila_sechellia
K4MUW4_Actias_selene
Q1T728_Rhyparobia_maderae
O76952_Aedes_aegypti
Q6X0I2_Solenopsis_invicta
ADE34166.1_Nilaparvata_lugens
D5KXW4_Nilaparvata_lugens
BAC02725_Periplaneta_americana
ADM34986.1_1_B_tabaci_B
CAJ19121_Blattella_germanica
H2CLV8_Antheraea_pernyi
XP_008180459_Acyrthosiphon_pisum
UPI000252AABD_Apis_florea
UPI0001758603_Tribolium_castaneum
T1KD20_Tetranychus_urticae
UPI0002063B8E_Apis_mellifera
E2FLQ4_Bombyx_mori

E T I V S A N V S Y A L D L A L D P I L N H V Y W V D K T L K V I E R A N Y D G T - - - - - R R R V
- - - - -
D M L L Q R S E S F M T A L T T D P H Q Q L L Y F V D Q H M R T L E R I S Y R L K T G P M R R P E I
D M L L Q R G E S F M T A L T T D P H Q Q L L Y F V D Q H T R T L E R I S Y R F K M G P L R R P E I
D M L V Q R S E S F M T A L T T D P H Q Q L L Y F V D Q H T R T L E R I S Y R L K T G P M R R P E I
L D L L H - - V T Q C S G L A A D S F T R R L Y V A E T A P P H I M V V D F D G K - - - - - N P K K
M E V A S D H M M L V N G I A L D F I R K K I Y I A D E H T N T I E C M S Y S G S - - - - - D R H L
L - V I T K D V S H V T S L Q V D T E N K L L Y I A D I S S R T I N A L D Y E G K - - - - - K L R T V
K - I I A S D L G F V R G M T I D H V K S K L Y W S D D F Y K T V E S S N F D G S - - - - - Q R K V
L E I V S T N L K Q V S D I F V D S F H A H I Y W V D S Q T R K V E R A S F D G S - - - - - N R Q E
L D L L H - - V T Q C S G L A A D S F H A H I Y W V D S Q T R K V E R A S F D G S - - - - - N P K K
T M I E T N N L M L V N G L T I D I V R Q R I Y F A D Q H K R T I E C M D Y N G E - - - - - D R H I
E T I V S A N V S Y A L D L A L D P I L N H V Y W V D K T L K V I E R A N Y D G T - - - - - R R R V
K T L V N E H M M L V Y G I A L D V V R K R I F I A D E H Q N T I E S M G Y S G E - - - - - D R H V
L D L L H - - V T Q C S G L A A D S F T R R L Y V A E T A P P H I M V V D F D G K - - - - - N P K K
K T I I H Q G L Q V V T D L A I D P I K H M V Y W V D Q V N S T I E R S N Y D G T - - - - - K I T V
T A I V H L D L G L V L A L T I D Y A R S K L Y W S D T H F K N I E S S N L D G S - - - - - N R A V
Q E L I K T S P G V I T G L S Y D L Y K K B L Y F I S Q H Q - - L S K I K Y D G S - - - - - D R T V
F R L I N E S L G V P N A L T I D Y I T R E L F W A D A K E D Y I S V S N L D G S - - - - - R H I
T A I V H L D L G L V L A L T I D Y T R S K L Y W S D T H F K N I E S S N L D G S - - - - - N R A V
L D L L H - - V T Q C S G L A A D S F T R R L Y V A E T A P P H I M V V D F D G K - - - - - N P K K

Bemisia tabaci Asia 1
T1E9W2_Anopheles_aquasalis
P98163_Drosophila_melanogaster
B4Q2Q9_Drosophila_yakuba
B4IGA9_Drosophila_sechellia
K4MUW4_Actias_selene
Q1T728_Rhyparobia_maderae
O76952_Aedes_aegypti
Q6X0I2_Solenopsis_invicta
ADE34166.1_Nilaparvata_lugens
D5KXW4_Nilaparvata_lugens
BAC02725_Periplaneta_americana
ADM34986.1_1_B_tabaci_B
CAJ19121_Blattella_germanica
H2CLV8_Antheraea_pernyi
XP_008180459_Acyrthosiphon_pisum
UPI000252AABD_Apis_florea
UPI0001758603_Tribolium_castaneum
T1KD20_Tetranychus_urticae
UPI0002063B8E_Apis_mellifera
E2FLQ4_Bombyx_mori

I L - - - T S K P E P K - - S V A L F D G S I Y W S V E S - - - - - S G S E I T K C A L
- - - - -
M L Q K S N A L M B P S - - G L S V Y E N N A F I V N I G - - - - - S V E - A V Q C A L
M L Q K S N A L M B P S - - G L S V Y E N N A F I V N I G - - - - - S V E - A V Q C A L
M L Q K S N A L M B P S - - G L S V Y E N N A F I V N I G - - - - - S V E - A V Q C A L
I L T E R P Q L Q A P H - - A L A L F E D H I Y Y L V G - - - - - D S Y R L G R C L L
I V - S S E H V K E P I - - N L A L F E G T L Y W L T A G - - - - - T G H - I T S Y K L
I E N Q N L A V S K P I - - G I M I Y E N Q A L V L N M - - - - - A S S T V G Q C K L
V L - - T L N M N E A L - - S I S I F E Q S L Y F L S - - - - - S D N L L S C K M
V F - - - T S P A V P T - - D I T L F E D Y M Y V L V Q A D S A S E N I D M I E T G N - V W R C G L
V F - - - T S P A V P T - - D I T L F E D Y M Y V L V Q A D S A S E N I D M I E T G N - V W R C G L
I V - H N E H V Q N P I - - D M A L F E G T L Y W L T A G - - - - - T G Q - L T S Y K L
I L - - - T S K P E P K - - S V A L F D G S I Y W S V E S - - - - - S G S E I T K C A L
V V D S N E H V Q K P I - - N L A L F E G T L Y W L T S G - - - - - T G Q - L T S Y K L
I L T E R P Q L Q A P H - - A L A L F E D H I Y Y L V G - - - - - D S Y R L G R C L L
L V - - N S I E H I P P - - K I S L Y E D K L F W T N H E - - - - - T G L S I F K C K V
V L - - N T D I H Q A M - - S I N I Y E D S L Y W L M G G - - - - - T G I - I R K C K L
L L - - - S N L Q S V - - G L N F F E N H L Y E K - - - - - S G N F M Q K C R L
I V H K A N S R P I S R V F A I T L F E D Y L Y W T D W - - - - - E R H T I A M C H K
V L - - N T G I H Q A M - - S I N I Y E D F L Y W L M G G - - - - - T G I - I R K C K L
I L T E R P Q L Q A P H - - A L A L F E D H I Y Y L V G - - - - - D S Y R L G R C L L

Bemisia tabaci Asia 1
T1E9W2_Anopheles_aquasalis
P98163_Drosophila_melanogaster
B4Q2Q9_Drosophila_yakuba
B4IGA9_Drosophila_sechellia
K4MUW4_Actias_selene
Q1T728_Rhyparobia_maderae
O76952_Aedes_aegypti
Q6X0I2_Solenopsis_invicta
ADE34166.1_Nilaparvata_lugens
D5KXW4_Nilaparvata_lugens
BAC02725_Periplaneta_americana
ADM34986.1_1_B_tabaci_B
CAJ19121_Blattella_germanica
H2CLV8_Antheraea_pernyi
XP_008180459_Acyrthosiphon_pisum
UPI000252AABD_Apis_florea
UPI0001758603_Tribolium_castaneum
T1KD20_Tetranychus_urticae
UPI0002063B8E_Apis_mellifera
E2FLQ4_Bombyx_mori

Q G L S T E S Y S C N Q I P I K V V D P I T H F T L M Q P A L Q - - R - N I S N A C R N M - - E C S
- - - - -
Y G S R I C - - H K I S I N V L N A Q - - - D I V V A G R S R Q - - P Q K A S H P C A H A - - H C H
Y G S R T C - - H K I S I N V L N A Q - - - D I V V A G K S R Q - - P Q K L S H P C G H A - - H C H
Y G S R I C - - H K I S I N V L N A Q - - - D I V V A G R S R Q - - P E K A S H P C A H A - - H C H
H G P K N C - - - - E T Y I Y R V F E A N T F V I R H E S I Q - - R D D L V N E C A G H - - D C S
Y G P P E M R E N K E Q L Y S Y G T E - - - H F T I L Q P S M Q - - P - L V A N P C A N H - - T C S
Y G D F E C - - - - R L M E L N V H N S N Q L L I V Q E S R Q - - P - E A E N V C D T K Q I N C S
Y G K R S C - - - - E H V N I G A N N V P R L F S I L H I S R Q - - V - P F A N P C D A E - - Y C D
Y G A A Y Q K C E L F R I H P K H F T V P Y H F E I M H P G L Q - - L - K G H N D C R N S T - D C Q
Y G A A Y Q K C E L F R I H P K H F T V P Y H F E I M H P G L Q - - L - K G H N D C R N S T - D C Q
Y G P H E R R I G K L Q L Y I K S S D - - - Q F T I L Q Q A I Q - - P - A A V N P C A N H - - S C S
Q G L S T E S Y S C N Q I P I K V V D P I T H F T L M Q P A L Q - - R - N I S N A C R N M - - E C S
Y G P P E R P P D K H Q L Y S Y G T E - - - H F A I L Q A S M Q - - P - I I V N P C A N H - - T C D
H G P K N C - - - - E T Y I Y R V F D A N T F V I R H E S I Q - - R D D L V N E C A A H - - D C S
L G S E N V - - - - H C E S V P V Q V E A T I E T F T I S Q Q A K Q - - R - N G S N V C I D V - - D C D
Y G D K L C - - - - T T I S I G T S N I N K Y F I L L H T I R O - - P - I G K N V C E K Y - - K C N
Y S P I T C - - - - E T F G L K G D - - - V F A I A Q E S R Q - - P E F G N N P C Q N H - - T C N
Y H C N S S - - - - S K V L S I S E R P M D I H I Y H F F R O I N P - K F E N P C N L L - - N C S
Y G D K S C - - - - T T I P I G T S N I N K Y F I L L H T I R O - - P - I G K N V C E K Y - - K C N
H G P K N C - - - - E T Y I Y R V F D A N T F V I R H E S I Q - - R D D L V N E C A G H - - D C S

<u>Bemisia tabaci Asia 1</u>	---	HMC	---	VLSSTL	---	PSCI	---
T1E9W2_Anopheles_aquasalis	---	RGV	---	---	---	QDTA	---
P98163_Drosophila_melanogaster	---	GLC	---	LQADYG	---	YECM	---
B4Q2Q9_Drosophila_yakuba	---	GLC	---	LQADYG	---	YECM	---
B4IGA9_Drosophila_sechellia	---	GLC	---	LQADYG	---	YECM	---
K4MUW4_Actias_selene	---	NVC	---	VLEKA	---	PVCV	---
Q1T728_Rhyparobia_maderae	---	EMC	---	VLSPGR	---	NPSCI	---
O76952_Aedes_aegypti	---	HVC	---	VPGADG	---	HGCVI	---
Q6X0I2_Solenopsis_invicta	---	YMC	---	VLKKEN	---	ATCI	---
ADE34166.1_Nilaparvata_lugens	SAG	GMC	---	LLRNHKLRP	SAV	CV	---
D5KXW4_Nilaparvata_lugens	SAG	GMC	---	LLRNHKLRP	SAV	CV	---
BAC02725_Periplaneta_americana	---	ELC	---	VMNPGG	---	TPSCI	---
ADM34986.1_1_B_tabaci_B	---	HMC	---	VLSSTL	---	PSCI	---
CAJ19121_Blattella_germanica	---	EMC	---	VLSPSG	---	YPVCL	---
H2CLV8_Antheraea_pernyi	---	NVC	---	VLEKA	---	PVCV	---
XP_008180459_Acyrtosiphon_pisum	---	FIC	---	TSGSKG	---	PMCV	---
UPI000252AABD_Apis_florea	---	HVC	---	VLGNG	---	PACI	---
UPI0001758603_Tribolium_castaneum	---	QLC	---	IPAKPQ	---	YRCL	---
T1KD20_Tetranychus_urticae	---	GLC	LLRPGLTHQAVGVCSCPDDH	VLGPNG	---	RSNISNCSDSQFR	C
UPI0002063B8E_Apis_mellifera	---	YMC	---	VLGNG	---	PACI	---
E2FLQ4_Bombyx_mori	---	NVC	---	VLEKA	---	PVCV	---

<u>Bemisia tabaci Asia 1</u>	---	CR	NGKIVPP	---
T1E9W2_Anopheles_aquasalis	---	CHLSGE	---	---
P98163_Drosophila_melanogaster	---	CG	N-RLVAE	---
B4Q2Q9_Drosophila_yakuba	---	CA	N-RLVAE	---
B4IGA9_Drosophila_sechellia	---	CG	N-RLVAE	---
K4MUW4_Actias_selene	---	CD	DGHVRDD	---
Q1T728_Rhyparobia_maderae	---	CS	DSTTRSM	---
O76952_Aedes_aegypti	---	CH	NGERIHG	---
Q6X0I2_Solenopsis_invicta	---	CS	DGESIES	---
ADE34166.1_Nilaparvata_lugens	---	CA	DGTRMR	---
D5KXW4_Nilaparvata_lugens	---	CA	DGTRMR	---
BAC02725_Periplaneta_americana	---	CS	GGQVEM	---
ADM34986.1_1_B_tabaci_B	---	CR	NGKIVPP	---
CAJ19121_Blattella_germanica	---	CS	DGTIVEM	---
H2CLV8_Antheraea_pernyi	---	CD	DGHVRDD	---
XP_008180459_Acyrtosiphon_pisum	---	CG	DGSQVEP	---
UPI000252AABD_Apis_florea	---	CF	NGYSKDS	---
UPI0001758603_Tribolium_castaneum	---	CE	NGKFVEP	---
T1KD20_Tetranychus_urticae	KRTMKCISKKWVCDKHHDDCKDGSDEPEQCKLSSCETGFFT	CR	NGSCIPV	---
UPI0002063B8E_Apis_mellifera	---	CF	DGYPKDS	---
E2FLQ4_Bombyx_mori	---	CD	DGHVRDD	---

<u>Bemisia tabaci Asia 1</u>	KTACTDSNYMPE	---
T1E9W2_Anopheles_aquasalis	---	---
P98163_Drosophila_melanogaster	GERCPHSGNEVAVLG	---
B4Q2Q9_Drosophila_yakuba	GERCPHSGNEVAVLG	---
B4IGA9_Drosophila_sechellia	GERCPHSGNEVAVLG	---
K4MUW4_Actias_selene	GN-CDPSSKNELPLFN	---
Q1T728_Rhyparobia_maderae	GEPCPAREEIIYERSSI	---
O76952_Aedes_aegypti	TDICPQTSNVMTPLVK	---
Q6X0I2_Solenopsis_invicta	NSTCNIKNDL	---
ADE34166.1_Nilaparvata_lugens	NSICEASSATIFDYDD	---
D5KXW4_Nilaparvata_lugens	NSICEASSATIFDYDD	---
BAC02725_Periplaneta_americana	GELCPTSEVGEGP	---
ADM34986.1_1_B_tabaci_B	KTACTDSNYMPE	---
CAJ19121_Blattella_germanica	GKSCP-KEELHDGSR	---
H2CLV8_Antheraea_pernyi	GN-CDPSSKNELPLFN	---
XP_008180459_Acyrtosiphon_pisum	GNICDDAGHRKLPVFK	---
UPI000252AABD_Apis_florea	KNICSENMNTRLIFNS	---
UPI0001758603_Tribolium_castaneum	EEDCD--TLMREANDD	---
T1KD20_Tetranychus_urticae	NQFCDGISQCSDGSDEECGHNLDIRCAECTIEGCKSICLNGGSCYMD	EQQ
UPI0002063B8E_Apis_mellifera	KNTCLENMNTKLIFFNS	---
E2FLQ4_Bombyx_mori	GS-CDSSKNELPLFN	---

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Bemisia tabaci Asia 1
T1E9W2_Anopheles_aquasalis
P98163_Drosophila_melanogaster
B4Q2Q9_Drosophila_yakuba
B4IGA9_Drosophila_sechellia
K4MUW4_Actias_selene
Q1T728_Rhyarobia_maderae
O76952_Aedes_aegypti
Q6X0I2_Solenopsis_invicta
ADE34166.1_Nilaparvata_lugens
D5KXW4_Nilaparvata_lugens
BAC02725_Periplaneta_americana
ADM34986.1_1_B_tabaci_B
CAJ19121_Blattella_germanica
H2CLV8_Antheraea_pernyi
XP_008180459_Acyrtosiphon_pisum
UPI000252AABD_Apis_florea
UPI0001758603_Tribolium_castaneum
T1KD20_Tetranychus_urticae
UPI0002063B8E_Apis_mellifera
E2FLQ4_Bombyx_mori

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AKCNCQNGYNGSRCEYNICNCKNGATCLASGGEGKICISPGFTGKLCETV

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Bemisia tabaci Asia 1
T1E9W2_Anopheles_aquasalis
P98163_Drosophila_melanogaster
B4Q2Q9_Drosophila_yakuba
B4IGA9_Drosophila_sechellia
K4MUW4_Actias_selene
Q1T728_Rhyarobia_maderae
O76952_Aedes_aegypti
Q6X0I2_Solenopsis_invicta
ADE34166.1_Nilaparvata_lugens
D5KXW4_Nilaparvata_lugens
BAC02725_Periplaneta_americana
ADM34986.1_1_B_tabaci_B
CAJ19121_Blattella_germanica
H2CLV8_Antheraea_pernyi
XP_008180459_Acyrtosiphon_pisum
UPI000252AABD_Apis_florea
UPI0001758603_Tribolium_castaneum
T1KD20_Tetranychus_urticae
UPI0002063B8E_Apis_mellifera
E2FLQ4_Bombyx_mori

```

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-----TFHLET TGTVDG-----
-----SWTVR-----
A--VNSLELEHE-----
A--VNSLELEQE-----
A--VNSLELEQE-----
-----GWTYQDYQRGHR-----
-----GIDTNT EVMRKK-----
-----THLGEAAPNVHD-----
-----KFVESINFSRN-----
-----VTYLT SNSPVQT-----
-----VTYLT SNSPVQT-----
-----WFEKVT PRGKQ-----
-----TFHLET TGTVDG-----
-----SHGLD SSKESGG-----
-----GWTYQDYQRGHR-----
-----DLDYKKN-----
-----SLVTYKNESIRH-----
-----GRRVKALHYVNN-----
TDPKCDNFICLNGGYCMVKDDLPHYCECPAGWKGSKCEKVKTGDEICDHYC
-----SLVIYKNESIRH-----
-----GWTYQDYQRGHR-----

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Bemisia tabaci Asia 1
T1E9W2_Anopheles_aquasalis
P98163_Drosophila_melanogaster
B4Q2Q9_Drosophila_yakuba
B4IGA9_Drosophila_sechellia
K4MUW4_Actias_selene
Q1T728_Rhyarobia_maderae
O76952_Aedes_aegypti
Q6X0I2_Solenopsis_invicta
ADE34166.1_Nilaparvata_lugens
D5KXW4_Nilaparvata_lugens
BAC02725_Periplaneta_americana
ADM34986.1_1_B_tabaci_B
CAJ19121_Blattella_germanica
H2CLV8_Antheraea_pernyi
XP_008180459_Acyrtosiphon_pisum
UPI000252AABD_Apis_florea
UPI0001758603_Tribolium_castaneum
T1KD20_Tetranychus_urticae
UPI0002063B8E_Apis_mellifera
E2FLQ4_Bombyx_mori

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LNSGNCTFTGGHFPPSCRCPAGWIGPRCQIAEGCKGFCLNGGLCKLTSDP

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Transmembrane region

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Bemisia tabaci Asia 1
T1E9W2_Anopheles_aquasalis
-----QSEYSSICATIIILVAFIGTTRFAL-----

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P98163_Drosophila_melanogaster	-----HEQNGHFHWMALFVLAAGSLIAGLQYMY
B4Q2Q9_Drosophila_yakuba	-----QHGHFHWMALFVLAAGSLIAGLQYMY
B4IGA9_Drosophila_sechellia	-----QEQNGHFHWMALLVLAAGSLIAGLQYMY
K4MUW4_Actias_selene	-----ASITVVI AVLVLFLVYIALFVYYH
Q1T728_Rhyarobia_maderae	-----QSSEFNKGFVVLVILILVLAAGVLAAGVYYK
O76952_Aedes_aegypti	-----SSDESSGSTIANVFLVLLILALVGVAGGYI
Q6X0I2_Solenopsis_invicta	-----TRNISGIYSITIIIVLLVSVLLCVVYYFY
ADE34166.1_Nilaparvata_lugens	-----SSLGSAFWMFLAFIFVVPVVGILWFVY
D5KXW4_Nilaparvata_lugens	-----SSLGSAFWMFLAFIFVVPVVGILWFVY
BAC02725_Periplaneta_americana	-----GGKSEEMQHSSNVGGIIIAILVIALVVGVAAYYYK
ADM34986.1_1_B_tabaci_B	-----QSPQYSWSSICATIIILVAFITGTFYAL
CAJ19121_Blattella_germanica	-----TQAAGKSAGLVMGLIIIAVIAITLGAAYYK
H2CLV8_Antheraea_pernyi	-----ASITVVI AVLVLFLVYIALFVYYH
XP_008180459_Acyrtosiphon_pisum	-----MISIIYISIFLIVMLLGLAMYYF
UPI000252AABD_Apis_florea	-----QNGTLIGIIITVLCIILIGSAVYYFY
UPI0001758603_Tribolium_castaneum	-----YASSNLGVPVIAAGVMISICLVVLAAYYYL
T1KD20_Tetranychus_urticae	LKTPYICICPPLSEGRKCEKARSSSTAGPVAMTVITICVVVVTVLFLMFG
UPI0002063B8E_Apis_mellifera	-----QNGTLIGIIITVLCIILIGSAVYYFY
E2FLQ4_Bombyx_mori	-----ASITVVI AVLVLFLVYIALFVYYH

Cytoplasmic region

<u>Bemisia_tabaci_Asia_1</u>	FYYYS-----KYNMRRLF--PSIHFKNP---AFNLQSKFQANG
T1E9W2_Anopheles_aquasalis	-----
P98163_Drosophila_melanogaster	YQYRQ-----RGHTDLNI--NMHFQNPPLATLGGTKAPLEHER
B4Q2Q9_Drosophila_yakuba	YQYRK-----RGHTDLNI--NMHFQNPPLATLSGKGFMEHER
B4IGA9_Drosophila_sechellia	YQYRQ-----RGHTDLNI--NMHFQNPPLATLGGTKAPLEHER
K4MUW4_Actias_selene	FVYKP-----KRRRSTAY--TEVRFQNS-----
Q1T728_Rhyarobia_maderae	YGF-----NKDSKEGF--SMHFSNP---TFGVQS-----
O76952_Aedes_aegypti	YRR-----RYQKEDI--GMHFNHP-----
Q6X0I2_Solenopsis_invicta	QKNKL-----KSKPASNLSCSSIHFNQP---SYDRSDEI-----
ADE34166.1_Nilaparvata_lugens	RGGPPSVPLSPPQWMPGCARRFPF--HTIRFNSK---FGNLDADDTIP
D5KXW4_Nilaparvata_lugens	RGGPPSVPLSPPQWMPGCARRFPF--HTIRFNSK---FGNLDADDTIP
BAC02725_Periplaneta_americana	RFG-----YKPKLNF--SLHFKNP---TFGKLE-----
ADM34986.1_1_B_tabaci_B	FYYYS-----KYNMRRLF--PSIHFKNP---AFNLQSKFQANG
CAJ19121_Blattella_germanica	YRG-----KNSKKEGF--SMHFQNP---TFGVRN-----
H2CLV8_Antheraea_pernyi	FVYKP-----KRRRSTAY--TEVRFQNS-----
XP_008180459_Acyrtosiphon_pisum	LFYSK-----NKSINQLV--SRLFHRPLTT-----
UPI000252AABD_Apis_florea	QKIKP-----NFSKKNL--SIHFQNP---SYDQRN-----
UPI0001758603_Tribolium_castaneum	IKR-----RNSGTFNV--ISMKFNHP---GYGLH-----
T1KD20_Tetranychus_urticae	LRIRARS-----RAMEHQRIDESANLEISNP--MFGDVBDDCVT
UPI0002063B8E_Apis_mellifera	QKIKP-----NFSKKNL--SIHFQNP---SYDQRN-----
E2FLQ4_Bombyx_mori	FVYKP-----KRRRSTAY--TEVRFQNS-----

<u>Bemisia_tabaci_Asia_1</u>	M-----TGLASGNHMAHLSS
T1E9W2_Anopheles_aquasalis	-----
P98163_Drosophila_melanogaster	AEAGVGFTTETGTVSSRGSNDT-FTTTSATSSFAAQFQFVSNALQRLLRP
B4Q2Q9_Drosophila_yakuba	AEAGVGAFAPETGTVSSRGSNDTFTTTTTTSSSFVAQFQFVSNALQRLLRP
B4IGA9_Drosophila_sechellia	TEAGVGAFATETGTVSSRGSNDT-FTTTSASSSFVAQFQFVSNALQRLLRP
K4MUW4_Actias_selene	-----SDEAAQLSCSP
Q1T728_Rhyarobia_maderae	-----PESHLDTPSESLVP
O76952_Aedes_aegypti	-----ELSTADAAEVKMFQK
Q6X0I2_Solenopsis_invicta	-----EVMDSMASSELSLP
ADE34166.1_Nilaparvata_lugens	-----AYSDFQFHPQQLNP
D5KXW4_Nilaparvata_lugens	-----AYSDFQFHPQQLNP
BAC02725_Periplaneta_americana	-----SDVAVPQVLP
ADM34986.1_1_B_tabaci_B	M-----TGLASGNHMAHLSS
CAJ19121_Blattella_germanica	-----STENPSTPPQGLVP
H2CLV8_Antheraea_pernyi	-----SDEAAQLSCSP
XP_008180459_Acyrtosiphon_pisum	-----VIQVIDQKEEINS
UPI000252AABD_Apis_florea	-----EIAPTLNCISGLPP
UPI0001758603_Tribolium_castaneum	-----TDEFDRSILKP
T1KD20_Tetranychus_urticae	-----TERPTQTFSLKSD
UPI0002063B8E_Apis_mellifera	-----EIAPTLNCISGLPP
E2FLQ4_Bombyx_mori	-----SDEAAQLSCSP

<u>Bemisia_tabaci_Asia_1</u>	KDHHFENPLQESRE-----GEVRIVTPNEITISR-AETSWSAHLEDSSS
T1E9W2_Anopheles_aquasalis	-----
P98163_Drosophila_melanogaster	RQSASGDPMAQELLESFSPRESKHLALDGGGAGG-DGDDGGRVGRQVPDI
B4Q2Q9_Drosophila_yakuba	RQAASGDPMAQELLESF-RESNLHSVDGGGAGG----CGGGVGRQVPDI

B4IGA9_Drosophila_sechellia RQSASGDPM AQELLESPL-RESKLSLDGGGDGC--- --GVGRQVPDI
K4MUW4_Actias_selene AVQMNGNQLINGNEFVNPLQYVRNVWQQSIIRKRP-RPVCTAGLSIAVPNS
Q1T728_Rhyarobia_maderae GQHQYVNFDSAGVREHPDGKVVMI PHEKISPAK-LETPHTTAEADEGAE
076952_Aedes_aegypti VPRLNQTFTHNELTLETPPHRPPCQ GDNSSSEST-GQNNVTSTALELENM
Q6X0I2_Solenopsis_invicta GQHEYINPIINNKGMKAAE--- --NNAKK-SNQCSEKNIIEEKQ
ADE34166.1_Nilaparvata_lugens GEHQYENPIAAMQAEQNSGAAITIKTMNEIDIQM-GEKNGWMAGGEGG
D5KXW4_Nilaparvata_lugens GEHQYENPIAAMQAEQNSGAAITIKTMNEIDIQM-GEKNGWMAGGEGG
BAC02725_Periplaneta_american GQHQYINPFDNAEALKQL-EGSVIQESRLKLA-DH--- --IQLEDE
ADM34986.1_1_B_tabaci_B KDHFENPLQESRE--- --GEVRIVTPNEITISR-AETSWTSAHLEDSSS
CAJ19121_Blattella_germanica GQHQYINPFDSAGVLEHP--DGKVLILSQQEKPP-VLIRIPSSERTDA
H2CLV8_Antheraea_pernyi AVQMNGNQLINGNEFVNPLQYVRNVWQQSIIRKRP-RPVCTAGLSIAVPNS
XP_008180459_Acyrthosiphon_pisum RYNVYENPMNEDGLIKDHACGSEIVLNYDSARYV-NA--- --NCSEPLLN
UPI000252AABD_Apis_florea GEHEYENPII--- --DIQKNQ-NENITQKNEKQMTKI
UPI0001758603_Tribolium_castaneum GQHEYENPVEFYGSENDNHNIQVNV--- --
T1KD20_Tetranychus_urticae KSKNFSNPMYEFQQTIDEEKRNLLEKNDMTEFPKDELNGESNGVIGDGL
UPI0002063B8E_Apis_mellifera GEHEYENPII--- --DIQKNQ-NENITQKNEKQMTKI
E2FLQ4_Bombyx_mori AVQMNGNQLINGNEFVNPLQYVRNVWQQSIIRKRS-RPVCTAGLSIAVPNS

Bemisia_tabaci_Asia_1 I E T E Y A D L V V E - - - - - T N P K A N L I S -
T1E9W2_Anopeles_aquasalis -
P98163_Drosophila_melanogaster L V A D M D D D A A K S A G Q F G G N Y A G N D A N A R F V S -
B4Q2Q9_Drosophila_yakuba L V A D M D D D A A K S G G Q F G G H Y A G D D A N A R F V P -
B4IGA9_Drosophila_sechellia L V A D M D D D A A K S A G Q F G G N Y A G D D A N A R F V S -
K4MUW4_Actias_selene P Q Q D F S D T E S D L D D R E T - - - K R F I L K N K F L N -
Q1T728_Rhyarobia_maderae M E D D T D Q G F I T - - - - - D T D S M K V K L I P -
076952_Aedes_aegypti S D V D S M E D A Y D - - - - - C R D D P L Q R L I L -
Q6X0I2_Solenopsis_invicta D A L I Y F V H N S K - - - - - - - - - - - - - - - - - - -
ADE34166.1_Nilaparvata_lugens D D S D S S T V E M P - - - - - - - - - - - - - - - - - - -
D5KXW4_Nilaparvata_lugens D D S D S S T V E M P - - - - - - - - - - - - - - - - - - -
BAC02725_Periplaneta_american D A E D Y A P D G S D - - - - - - - - - - - - - - - - - - -
ADM34986.1_1_B_tabaci_B I E T E Y A D L V V E - - - - - T N P K A N L I S -
CAJ19121_Blattella_germanica A D F E M E D D T S Q - - E F V S - - - D N N D M K A P L I S -
H2CLV8_Antheraea_pernyi P Q Q D F S D T E S D L D D R E T - - - K R F I L K N K F L N -
XP_008180459_Acyrthosiphon_pisum S F S E Y D E N E K K - - - - - - - - - - - - - - - - - - -
UPI000252AABD_Apis_florea L N F D R S D N E S E - - - - - E - - - S A Y K Q D I S L I -
UPI0001758603_Tribolium_castaneum -
T1KD20_Tetranychus_urticae P A F L L S E L V V P G H F K T T K E I L D T K K L S D P L Y V G
UPI0002063B8E_Apis_mellifera L N F D R S D N E S E - - - - - E - - - S A N K Q D I S L I -
E2FLQ4_Bombyx_mori P Q Q D F S D T E S D L D D R E T - - - K R F I R K N K F L N -