

Manuscript title:

“A Bowman-Birk inhibitor with anti-elastase activity from *Lathyrus sativus* L. seeds” by Rocco et al., 2011

Figure 1S: Alignment of all 136 Bowman-Bik inhibitors from Papilionoideae subfamily and LSI-1. The site 1 and site 2 of binding of peptide substrate to a serine protease are indicate (P1-P1’ residues for α -chymotrypsin are yellow³⁷).The accession numbers of the amino acid sequences were reported in Table 1S (supplementary material).

sp P86701 LSI-1	-----GD-----	2
sp P83284 IBB1_AMBAC	-----	
sp P01066 IBB1_ARAHY	-----	
sp P82469 IBB1_DIOGL	-----	
sp P85172 IBB1_LUPAL	-----	
sp P01058 IBB1_PHAAN	-----SGHHDET-----	7
sp P01055 IBB1_SOYBN	-----MVLKVCIVLLFLVGGTTSANLRLSKLGLLMKSD-HQHS-----	38
sp P83283 IBB2_AMBCE	-----	
sp P01067 IBB2_ARAHY	-----	
sp Q41066 IBB2_PEA	--MELMNKKVMMKLALMVFLLSFAANVVNARFDSTSFITQVLSNGD----	44
sp P01061 IBB2_PHAAN	-----SVHHQDS-----	7
sp P01060 IBB2_PHAVU	-----MMVLKVCLLLVLFLAGVTTA----RMDLNHLIGSN-HHDS----	34
sp P01057 IBB3_DOLAX	-----DHHHS-----	5
sp P81484 IBB3_PHAVU	-----SGHRHESXB-S	10
sp P01059 IBB4_DOLAX	-----HEHS-----	4
sp P16343 IBB4_LONCA	-----DDHSDS-----	7
sp Q41065 IBBA_PEA	-----LSFAANVVNARFDSTSFITQVLSNGD----	26
sp P81483 IBB4_PHAVU	-----KSGHRHESXB-S	11
sp P56679 IBBB_PEA	-----GD-----	2
sp P01064 IBBD2_SOYBN	-----MCIL-----SFLKSD---QSS-----	13
sp P01063 IBBC2_SOYBN	-----MELNLFKSD---HSS-----	12
sp P16346 IBBWT_MEDSA	-----	
sp Q9S9E3 IBB_DOLBI	-----DHHQS-----	5
sp P81705 IBB_ERYVA	-----	
sp Q8W4Y8 IBB_LENCU	--MVLMNKKAIMKLALMLFLLGFTANVVDARFDSTSFITQVLSNGD----	44
sp P80321 IBB_MEDSC	-----	
sp P83311 IBB_PHAAT	-----SGHHHHD---S	8
sp P01062 IBB_PHAAU	-----S-----	1

sp P01056 IBB_PHALU	-----SGH-HEH---S	7
sp P01065 IBB_VICAN	-----GD----	2
sp P24661 IBB_VICFA	-----GD----	2
sp P17734 IBB_VIGUN	-----SGH-HZB---S	7
tr Q7X973 Q7X973_ARAHY	-----MLSQVINNIG----	10
tr Q43709 Q43709_SOYBN	-----MVVLKVCLLLLFLVGVTAA----PMELSFFKSD---QSS----	32
tr Q4W2W0 Q4W2W0_LENCU	-MVL MNKK-TMMKLALMLFLLGFTATVVDARFDSTFFITQLFANVDAS--	46
tr Q1WA43 Q1WA43_VIGUN	-----MMVLKVCVLVFLVGVTTA----AMDNLHLGSN-HHDDS----	34
tr Q7Y1U3 Q7Y1U3_PHAAU	-----MMVLKVCVLVFLVGVTTA----GMDLNQLRSS-HHHDS----	34
tr Q4W2W7 Q4W2W7_LENCU	-MVL MNKK-TMMKLVLMLFLLGFTATVADARFDSTFFITQLFANVDAS--	46
tr A8KRM2 A8KRM2_9FABA	-----MMVLKVCLLLVLFLAGVTTA----RMDNLHLIRSN-HHDS----	34
tr A4Q9H3 A4Q9H3_9FABA	-----MMVLKVCLLLVLFLAGVTTA----RMDNLHLIRSN-HHDS----	34
tr Q9M3X3 Q9M3X3_PEA	--MELMNKKAMMKLALMVFLLSFAANVVNARFDSTSFITQVLSNGD----	44
tr Q40330 Q40330_MEDSA	MELMMNKKAMMMKLALLVFLLGFTSTGVDARFDRASFITQLLFNGEAA-	49
tr Q8VX09 Q8VX09_PEA	--MELMNKKAMMKLALMVFLLSFAANVVNARFDSTSFITQVLSNGD----	44
tr Q9AVS2 Q9AVS2_PEA	-MVL MNKK-AMMKLALVLFLLGFTATVVDARFDSNSFITQLLSNGGAS--	46
tr Q84X88 Q84X88_VIGSI	-----MMVLKVCVLVFLVGVTTA----AMDNLHLGSN-HHDDS----	34
tr Q84X85 Q84X85_VIGUS	-----MMVLKVCVLVFLVGVTTA----AMDNLHLGSN-HHDDS----	34
tr A4Q9H4 A4Q9H4_PHAMA	-----MMVLKVCLLLVLFLAGVTTA----RMDNLHLIRSN-HHDS----	34
tr Q941H5 Q941H5_VIGMU	-----MVVLKVCMLLLFLLGTCAAS-LKQSELEQLIKSGRHHES----	38
tr Q6PWT2 Q6PWT2_VIGUN	-----MMVLKVCVLVFLVGVTTA----AMDNLHLGSN-HHDDS----	34
tr Q8VX10 Q8VX10_PEA	--MELMNKKAMMKLALMVFLLSFAANVVNARLDSTSFITQVLSNGD----	44
tr Q8W4Y3 Q8W4Y3_9FABA	--MVL MNKKAIMKLALMLFLLGFTANVVNARFDSTSFITQVLSNGD----	44
tr Q6A4J9 Q6A4J9_MEDSC	MVLMMNKKAMMMKLALLVFLLSFASTTVDARFDRASFITQLLSNGEAN--	48
tr Q4W2W6 Q4W2W6_LENCO	-MVL MNKK-TMMKLALMLFLLGFTATVVDARFDSTFFITQLFSNGDAS--	46
tr Q4W2V9 Q4W2V9_LENER	-MVL MNKK-TMMKLALMLFLLGFTATVVDARFDSTFFITQLFSNGDAS--	46
tr Q05G17 Q05G17_PHALU	MGLKNNTMVLKVCVLLFLLGTSTAS-LKLSELGLLMKSGHHHES----	45
tr A4Q977 A4Q977_PHACN	-----MMVLKVCLLLVLFLAGVTTA----RMDNLHLMRSNHHHDS----	35
tr A4Q9H5 A4Q9H5_9FABA	-----MMVLKVCLLLVLVGVTTA----RMDNLHLIRSN-HHDS----	34
tr A4Q978 A4Q978_PHACN	-----MMVLKVCLLLVLFLAGVTTA----RMDNLHLMRSNHHHDS----	35
tr Q8RU23 Q8RU23_GLYSO	-MGLKNMVMVLKVCVLVFLVGTTTSASLRLSELGLLMKSDHHQHS----	45
tr A4Q973 A4Q973_9FABA	-----MMVLKVCLLLVLVGVTTA----RMDNLHLIRSN-HHDS----	34
tr Q05G16 Q05G16_9FABA	MGLKNNTMVLKVCVLLFLLGTSTAS-LKLSELGLLMKSGHHHES----	45
tr A8KRN4 A8KRN4_9FABA	-----MMVLKVCLLLVLVGVTTA----RMDNLHLIRGN-HHDS----	34
tr B1ACD4 B1ACD4_SOYBN	--MELSMK-VLVKVASLLFLLGFTATVVDARFDPSSFITQFLPNAEANN-	46
tr Q9S9H8 Q9S9H8_VIGUN	-----SGDHHQD---F	8
tr Q1W3Z5 Q1W3Z5_VIGMU	-----MVVLKVCMLLLFLLGTCAAS-LKQSELEQLIKSGRHHES----	38
tr A4Q976 A4Q976_PHACN	-----MMVLKVCLLLVLFLAGVTTA----RMDNLHLIRSN-HHDS----	34
tr A4Q9H2 A4Q9H2_9FABA	-----MMVLKVCLLLVLFLAGVATA----RMDNLHLIRSN-HHDS----	34

tr B2RGA4 B2RGA4_9FABA	MGLKNNNTMVLKVCFVLLFLLGTSTAS-LKLSELGQLTKSGHHHES-----	45
tr Q8RU22 Q8RU22_GLYSO	-MGLKNNMVVLKVCFLVLFLVGVNTA-----RMELNLFKSD---HSS-----	38
tr Q8VX23 Q8VX23_PEA	--MELMNKKAMMKLALMVFLLSFAANVVNARFDSTSFITQVLSNGD-----	44
tr Q84LF5 Q84LF5_9FABA	-----MVVLKVCVLVLLFLEGGTTSANLRLSKLGLLMKSDHHQHS-----	39
tr Q0PKR5 Q0PKR5_ARAHY	-----	
tr B2RG92 B2RG92_9FABA	MGLKNNNTMVLKVCFMLLFLLGTSTAS-LKLSELGLLMKSGHHHES-----	45
tr B2RG95 B2RG95_9FABA	MGLKNNNTMVLKVCFMLLFLLGTSTAS-LKLSELGLLMKSGHHHES-----	45
tr B2RGA5 B2RGA5_9FABA	MGLKNNNTMVLKACFMLLFLLGTSTAS-LKLSELGLLMKSGHHHES-----	45
tr A0JKD0 A0JKD0_9FABA	MGLKNNNTMVLKVCFVLLFLLGTSTAS-LKLSELGQLMKSGHHHES-----	45
tr B1ACD1 B1ACD1_SOYBN	--MELSMK-VLVKVASLLFLLGFTATVVDARFDPSSFITQFLPNAEANN-	46
tr B1GYE5 B1GYE5_9FABA	-----MMVLKVCLLLLIFLVGVTTA-----RMDLNHLIRSN-HHDS-----	34
tr A4FS27 A4FS27_DOLBI	-----	
tr Q8VX22 Q8VX22_PEA	--MELMNKKAMMKLALMVFLLGFTANVVNARLDSTSFITQVLSNGD-----	44
tr Q8VX18 Q8VX18_PEA	--MELMNKKAMMKLALMVFLLGFTANVVNARLDSTSFITQVLSNGD-----	44
tr Q8W4Y6 Q8W4Y6_LENER	--MVLMNKKAIMKLALMVFLLGFTANVVNARFDSTSFITQVLSNGD-----	44
tr Q40329 Q40329_MEDSA	MELMMNKKAMMKLALLVFLLGFTSTVVDARFDQASFISQLLFNGEAA-	49
tr Q8RU21 Q8RU21_GLYSO	-MSLKNNMVVLKVCLLLLFLVGVTA-----RMELSFVKSD---QSS-----	38
tr A0JKC2 A0JKC2_9FABA	MGLKNNNTMVLKVCFMLLFLLGTSTAS-LKLSELGLLMKSGHHHES-----	45
tr A4PIB8 A4PIB8_9FABA	--MEMKKK-VVMKVALLLFFLGFTAT-VDARFDPSSFISQLLPNGDAS--	44
tr Q8VX20 Q8VX20_PEA	--MELMNKKAMMKLALMVFLSFAANVVNARLDSTSFITQVLSNGD-----	44
tr Q9AVS1 Q9AVS1_PEA	-MVLMNKK-AMMKLALMLFLLGFTATVVDARFDSDFSIIQLLSKGDAS--	46
tr Q8W4Y2 Q8W4Y2_LENCU	--MVLMNKKAIMKLALMLFLLGFTANVVNARFDSTSFITQVLSNGD-----	44
tr Q1WA44 Q1WA44_9FABA	-----MMVLKVCVLVFLVGVTTA-----GMDLNQLRSS-HHHDS-----	34
tr Q84X86 Q84X86_VIGUS	-----MMVLKVCVLVLFLVGVTTA-----AMDNLHLRSN-HHDS-----	34
tr Q1W3Z4 Q1W3Z4_9FABA	-----MMVLKVCVLVLFLVGVTTAN---GMDNLHLRSN-HHDS-----	35
tr Q05G15 Q05G15_9FABA	MGLKNNNTMVLKVCFMLLFLLGTSTAS-LKLSELGLLMKSGHHHES-----	45
tr A0AQW6 A0AQW6_9FABA	MGLKNNNTMVLKVCFMLLFLLGTSTAS-LKLSELGLLMKSGHHHES-----	45
tr C6SZZ4 C6SZZ4_SOYBN	-MGLKNNMVVLKVCVLVLLFVLVGGTTSASLRLSELGLLMKSDHHQHS-----	45
tr A7DZQ6 A7DZQ6_9FABA	-----MMVLKVCLLLLVFLVGVTTA-----RMDLNHLIRSN-HHDS-----	34
tr Q84X87 Q84X87_DOLBI	-----MMVLKVCVLVLFLVGVTTA-----AMDNLHLGSN-HHDS-----	34
tr Q05G14 Q05G14_PHAMA	MGLKNNNTMVLKVCFVLLFLLGTSTAS-LKLSELGLLMKSGHHHES-----	45
tr A0JKC9 A0JKC9_9FABA	MGLKNNNTMVLKVCFVLLFLLGTSTAS-LKLSELGQLMKSGHHHES-----	45
tr B0JFB3 B0JFB3_PHACN	-----MMLLKVCLLLLVFLAGVTTA-----RMDLNHLMRSNHHHDS-----	35
tr Q9SBA9 Q9SBA9_SOYBN	-----	
tr Q941H6 Q941H6_DOLBI	-----MVVLKVCFMLLFLLGTSTAS-LRLSELGILIKNDHHQS-----	37
tr B7FMP4 B7FMP4_MEDTR	MVLMMNKKAMMKLALLVFLLSFTSTMVVDARFDRASFITQLLSNGEAN--	48
tr Q8VX21 Q8VX21_PEA	--MELMNKKVMMKLALMVFLLSFAANVVNARFDSTSFITQVLSNGD-----	44
tr Q8VX19 Q8VX19_PEA	--MELMNKKAMMKLALMVFLLSFAANVVNARFDSTSFITQVLSNGD-----	44
tr Q4W2W2 Q4W2W2_LENCT	-MVLMNKK-TMMKLALMLFLLGFTATVVDARFDSTFFITQLFSNDDAS--	46

tr A4VAS0 A4VAS0_PHAAT	-----MMVLKVCLLLVLFLAGVTTA----RMDLNHLIRSN-HHDS----	34
tr Q8RU24 Q8RU24_GLYSO	-MGLKNNMVVLKVCVLVLLFLVGGTTSANLRLSKLGLLMKSDHHQHS----	45
tr Q84X89 Q84X89_VIGSI	-----MMVLKVCVLVFLVGVTTA----AMDNLHLRSN-HHDS----	34
tr Q4W2V8 Q4W2V8_9FABA	-MVL MNKK-TMMKLALMLFLLGFTATVVDARFDSTFFITQLFSNGDAS--	46
tr Q53ZY0 Q53ZY0_SOYBN	-----MVVLKVCVLVLLFLVGGTTSANLRLSKLGLLMKSD-HQHS----	38
tr Q1WAK3 Q1WAK3_9FABA	-----MMVLKVCVLVFLVGVTTA----GMDLNHLRSIH HHHDS----	35
tr Q93YY2 Q93YY2_PHAVU	-----MMVLKVCVLVFLVGVTTA----AMDNLHLGSN-HHDS----	34
tr A0JKC1 A0JKC1_9FABA	MGLKNNNTMVLKVCFMLLFLLGTTAS-LKLSELGLLMKSGHHHQHS----	45
tr B2RG94 B2RG94_9FABA	MGLKNNNTMVLKVCFMLLFLLGTTAS-LKLSELGLLMKSGHHHES----	45
tr C6SVG7 C6SVG7_SOYBN	--MELSMK-VLVKVASLLFLEFTATVVDARFDPSSFITQFLPNAEANN-	46
tr C6SX26 C6SX26_SOYBN	-MGLKNNMVVLKVCFLVFLVGVTTA----RMELNLFKSD---HSS----	38
tr Q8W4Y7 Q8W4Y7_LENCU	--MVL MNKKAIMKLVLMLFLLGFTANVVNARFDSTSFITQVLSNGD----	44
tr Q1WAK2 Q1WAK2_9FABA	-----MMVLKVCVLVFLVGVTTA----GMDLNHLRSIH HNDS----	35
tr Q1W3Z3 Q1W3Z3_9FABA	-----MVLKVCFLVLLFLLGTTAS-LKLSELGVL MKSGHHHQHS----	37
tr A4Q974 A4Q974_9FABA	-----MMVLKVCLLLVLVGVTTA----RMDLNHLIRSN-HHDS----	34
tr Q941H3 Q941H3_PHALU	-----MVVLKVCFLVLLFLLGTTAS-LKLSELGLLMKSGHHHES----	38
tr Q29Y80 Q29Y80_LENCU	-----	
tr Q4W2W4 Q4W2W4_LENCO	-MVL MNKK-TMMKLALMLFLLGFTATVADARFDSTFFITQLFANGDAS--	46
tr Q4VVG2 Q4VVG2_VIGUN	-----MMVLKVCVLVFLVGVTTA----AMDNLHLGSN-HHDS----	34
tr A4Q975 A4Q975_9FABA	-----MMVLKVCLLLVLVGVTTA----RMDLNHLIR-N-HHDS----	33
tr A8KRM8 A8KRM8_9FABA	-----MMVLKVCLLLVLVGVTTA----RMDLNHLIRGN-HHDS----	34
tr B2RG93 B2RG93_9FABA	MGLKNNNTMVLKVCFRLLFLLGTTAS-LKLSELGLLMKSGHHHES----	45
tr C6SVL8 C6SVL8_SOYBN	-MGLKNNMVVLKVCVLVLLFLVGGTTSANLRLSKLG LHMKSDDHHQHS----	45
tr Q8VX24 Q8VX24_PEA	--MEL MNKKVMMKLALMVFLLGFTANVVNARLDSTSFITQVLSNGN----	44
tr Q8W4Y1 Q8W4Y1_LENCT	--MVL MNKKAIMKLVLMLFLLGFTANVVNARFDSTSFITQVLSNGD----	44
tr Q9AVS0 Q9AVS0_PEA	-MVL MNKK-AMMKLALMLFLLGFTATVVDARFGSTSFITQLLSNGDAS--	46
tr Q4W2W3 Q4W2W3_LENCT	-MVL MNKK-TMMKLALMLFLLGFTATVADARFDSTFFITQLFANGDAS--	46
tr Q4W2W5 Q4W2W5_LENCO	-MVL MNKK-TMMKLVLMLFLLGFTATVADARFDSTFFITQLFANVDAS--	46
tr Q2VMU0 Q2VMU0_ARAHY	-----MVAKVALLFLVGLSATVEAVRLDPSLMLSQVINNIG----	37
tr D6MZ10 D6MZ10_9FABA	-----MMVLKVCVLVLLVGVTTA----GMDLNQLRSS-HHHDS----	34
tr C7BUS0 C7BUS0_LENCU	--MVL MNKKAIMKLALMLFLLGFTANVVDARFDSTSFITQVLSNGD----	44

	site 1	site 2
	P1 P1'	P1 P1'
	↙ ↘	↙ ↘
sp P86701 LSI-1	-----DVKSACCDTCLCT <u>KS</u> NPP--ICRCVDIR-ETCHSACNSCVCT <u>A-S</u>	43
sp P83284 IBB1_AMBAC	----SSKWEACCDRCAC ^T KSIPP--QCHCADIRLNSCHSACESCAC ^T <u>R-S</u>	43
sp P01066 IBB1_ARAHY	EASSSSDDNVCCNGCLCDRRAPPYFECVCVDTF-DHCPASCNSCVCT <u>R-S</u>	48
sp P82469 IBB1_DIOGL	-----SSGPCCDRCRCTKSEPP--QCQCQDVRLNSCHSACEACVCS <u>H-S</u>	41
sp P85172 IBB1_LUPAL	----SLASKPCCDSCLCTR ^S IPP--QCRCTDIG-ETCHSACKSCICT <u>R-S</u>	42

sp P01058 IBB1_PHAAN	TDEPSESSKPCCDQCCTKSMPP--KCRCSDIRLNSCHSACKSCACT	Y-S	54
sp P01055 IBB1_SOYBN	NDD--ESSKPCCDQCACTKSNPP--QCRCSMDRLNSCHSACKSCICA	L-S	83
sp P83283 IBB2_AMBCE	----SSKWEACCDRCCTKSIIPP--QCHCADIRLNSCHSACESACT	H-S	43
sp P01067 IBB2_ARAHY	---AASD---CCSACICDRRAPPYFECTCGDTF-DHCPAACNKCVCT	R-S	42
sp Q41066 IBB2_PEA	-----DVKSACCDTCLCTKSDPP--TCRCVDVG-ETCHSACDSCICA	L-S	85
sp P01061 IBB2_PHAAN	SDEPSESSHPCCDLCLCTKSIPP--QCQCADIRLDSCHSACKSCMCT	R-S	54
sp P01060 IBB2_PHAVU	SDEPSESSEPCCDICVCTASIPP--ICQCTDVRLNSCHSACKSCMCT	R-S	81
sp P01057 IBB3_DOLAX	TDEPSESSKPCCDECACTKSIPP--QCRCTDVRLNSCHSACSSCVCT	F-S	52
sp P81484 IBB3_PHAVU	TBXASXSSKPCCBHCCTKSIPP--QCRCSBLRLNSCHSECKGCICT	F-S	57
sp P01059 IBB4_DOLAX	SDESSESSKPCCDLCTCTKSIPP--QCHCNDMRLNSCHSACKSCICA	L-S	51
sp P16343 IBB4_LONCA	EPRESESSKPCCSSC-CTRSRPP--QCQCTDVRLNSCHSACKSCMCT	F-S	53
sp Q41065 IBBA_PEA	-----DVKSACCDTCLCTKSNPP--TCRCVDVR-ETCHSACDSCICA	Y-S	67
sp P81483 IBB4_PHAVU	TBXASXSSKPCCBHCCTKSIPP--QCRCSBLRLNSCHSECKGCICT	F-S	58
sp P56679 IBBB_PEA	-----DVKSACCDTCLCTKSNPP--TCRCVDVG-ETCHSACLSCICA	Y-S	43
sp P01064 IBBD2_SOYBN	SYDDDEYSKPCCDLCMCTRSMP--QCSCEDIRLNSCHSDCKSCMCT	R-S	60
sp P01063 IBBC2_SOYBN	S--DDESSKPCCDLCMTASMP--QCHCADIRLNSCHSACDRCACT	R-S	57
sp P16346 IBBWT_MEDSA	-----TTACCNFCPCTRSIPP--QCRCTDIG-ETCHSACKTCLCT	K-S	39
sp Q9S9E3 IBB_DOLBI	TDEPSESSKPCCDQCTCTKSIPP--QCRCTDVRLNSCHSACSSCVCT	F-S	52
sp P81705 IBB_ERYVA	-----TSACCDKCFCTKSNPP--ICQCRDVG-ETCHSACKFCICA	L-S	39
sp Q8W4Y8 IBB_LENCU	-----DVKSACCDTCLCTRSQPP--TCRCVDVR-ESCHSACKKVCAY	Y-S	85
sp P80321 IBB_MEDSC	---TKSTTTACCDFCPCTRSIPP--QCQCTDVR-EKCHSACKSCLCT	R-S	43
sp P83311 IBB_PHAAT	SDEPSESSKACCDHCCTKSIPP--QCRCA-LRLNCNH--CRSCICT	F-S	52
sp P01062 IBB_PHAAU	HDEPSESSEPCCDSCDCTKSIPP--EHCANIRLNSCHSACKSCICT	R-S	48
sp P01056 IBB_PHALU	TDZPSZSSKPCCBHCCTKSIPP--QCRCTDLRLDSCHSACKSCICT	L-S	54
sp P01065 IBB_VICAN	-----DVKSACCDTCLCTRSQPP--TCRCVDVG-ERCHSACNHVCVN	Y-S	43
sp P24661 IBB_VICFA	-----DVKSACCDTCLCTKSEPP--TCRCVDVG-ERCHSACNSCVCR	Y-S	43
sp P17734 IBB_VIGUN	TBZASZSSKPCCRZCACTKSIPP--ZCRCSZVRLNSCHSACKSCACT	F-S	54
tr Q7X973 Q7X973_ARAHY	EASSSSDDNVCCNGCLDRRAPPYFECVCVDTF-DHCPASCNSCVCT	R-S	58
tr Q43709 Q43709_SOYBN	SYDDDEYSKPCCDLCMCTRSMP--QCSCEDIRLNSCHSDCKSCMCT	R-S	79
tr Q4W2W0 Q4W2W0_LENCU	-----NKACCNSCPCTRSIPP--KCSCSDIG-ETCHSACKSCLCT	R-S	85
tr Q1WA43 Q1WA43_VIGUN	SDEPSESSEPCCDSCICTKSIPP--QCHCTDIRLNSCHSACKSCMCT	R-S	81
tr Q7Y1U3 Q7Y1U3_PHAAU	SDEPSESSEPCCDSCRCTKSIPP--QCHCADIRLNSCHSACKSCMCT	R-S	81
tr Q4W2W7 Q4W2W7_LENCU	-----NKACCNSCPCTRSIPP--KCSCSDIG-ETCHSACKSCLCT	R-S	85
tr A8KRM2 A8KRM2_9FABA	SDEPSESSEPCCDLCLCTASIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	81
tr A4Q9H3 A4Q9H3_9FABA	SDEPSESSEPCCDLCLCTASIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	81
tr Q9M3X3 Q9M3X3_PEA	-----DVKSACCDTCLCTKSNPP--TCRCVDVR-ETCHSACDSCICA	Y-S	85
tr Q40330 Q40330_MEDSA	-YDVKSTTTACCNFCPCTKSIPP--QCRCSDIG-ETCHSACKSCICT	R-S	94
tr Q8VX09 Q8VX09_PEA	-----DVKSACCDTCLCTKSNPP--TCRCVDVG-ETCHSACNSCICA	L-S	85
tr Q9AVS2 Q9AVS2_PEA	-----NKACCDSCLCCTRSIPP--RCRCNDIG-ETCHSACKTCICT	R-S	85

tr Q84X88 Q84X88_VIGSI	SDEPSESSEPCCDSCICTKSIPP--QCHCTDIRLNSCHSACKSCMCT	R-S	81
tr Q84X85 Q84X85_VIGUS	SDEPSESSEPCCDSCICTKSIPP--QCHCTDIRLNSCHSACKSCMCT	R-S	81
tr A4Q9H4 A4Q9H4_PHAMA	SDEPSESSEPCCDLCLCTASIPP--ICQCSDIRLNSCHSACKSCMCT	R-S	81
tr Q941H5 Q941H5_VIGMU	TDEPSESSKPCCDQCACTKSIPP--KCRCSDLRLNSCHSACKSCACT	Y-S	85
tr Q6PWT2 Q6PWT2_VIGUN	SDEPSESSEPCCDSCICTKSIPP--QCHCTDIRLNSCHSACKSCMCT	R-S	81
tr Q8VX10 Q8VX10_PEA	-----DVKSACCDTCLCTKSNPP--TCRCVDVG-ETCHSACNSCICA	L-S	85
tr Q8W4Y3 Q8W4Y3_9FABA	-----DVKSACCDTCLCTRSQPP--TCRCVDVR-ESCHSADKCVCA	Y-S	85
tr Q6A4J9 Q6A4J9_MEDSC	---TKSTTTACCDFCPCTRSIPP--QCQCTDVR-EKCHSACKSCLCT	R-S	91
tr Q4W2W6 Q4W2W6_LENCO	-----NKACCNSCPCTRSIPP--KCSCSDIG-ETCHSACKSCLCT	R-S	85
tr Q4W2V9 Q4W2V9_LENER	-----NKACCNSCPCTRSIPP--KCSCSDIG-ETCHSACKSCLCT	R-S	85
tr Q05G17 Q05G17_PHALU	TDEPSESSKPCCDHCACTKSIPP--QCRCTDLRLDSCHSACKSCICT	L-S	92
tr A4Q977 A4Q977_PHACN	SDEPSESSEPCCDLCVCTDSIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	82
tr A4Q9H5 A4Q9H5_9FABA	SDEPSESSEPCCDLCMCTDSIPP--ICQCTDIRLNSCHSACKTCMCT	R-S	81
tr A4Q978 A4Q978_PHACN	SDEPSESSEPCCDLCLCTASIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	82
tr Q8RU23 Q8RU23_GLYSO	NDD--DSSKPCCDQCACTKSNPP--QCRCSMDRLNSCHSACKSCICA	L-S	90
tr A4Q973 A4Q973_9FABA	GDEPSESSEPCCDLCMCTDSIPP--ICQCTDIRLNSCHSACKTCMCT	R-S	81
tr Q05G16 Q05G16_9FABA	TDEPSDSSKPCCDQCACTKSIPP--QCRCSDLRLDSCHSACKSCICT	L-S	92
tr A8KRN4 A8KRN4_9FABA	SDEPSESSEPCCDLCVCTDSIPP--ICQCTDIRLNSCHSACKTCMCT	R-S	81
tr B1ACD4 B1ACD4_SOYBN	-YYVKSTTKACCNSCPCTKSIPP--QCRCSDIG-ETCHSACKTCICT	R-S	91
tr Q9S9H8 Q9S9H8_VIGUN	TDEPSE--EACCDQCECTKSIPP--QCRCSDVRLNSCHSACKSCACT	F-S	53
tr Q1W3Z5 Q1W3Z5_VIGMU	TDEPSESSKPCCDQCACTKSIPP--KCRCSDLRLNSCHSACKSCACT	Y-S	85
tr A4Q976 A4Q976_PHACN	SDEPSESSEPCCDLCVCTDSIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	81
tr A4Q9H2 A4Q9H2_9FABA	SDEPSESSQPCCDLCTASIPP--QCQCKDIRLNSCHSACKSCMCT	R-S	81
tr B2RGA4 B2RGA4_9FABA	TDEPSESSKACCDQCACTKSIPP--QCRCSDLRLNSCHSACKSCICT	L-S	92
tr Q8RU22 Q8RU22_GLYSO	S--DDESSKPCCDLCMCTASMPP--QCHCADIRLNSCHSACDRCACT	R-S	83
tr Q8VX23 Q8VX23_PEA	-----DVKSACCDTCLCTKSNPP--TCRCVDVR-ETCHSACDSCICA	Y-S	85
tr Q84LF5 Q84LF5_9FABA	NDD--ESSKPCCDQCACTKSNPP--QCRCSMDRLNSCHSACKSCICA	L-S	84
tr Q0PKR5 Q0PKR5_ARAHY	-----DDNVCCNGCLCDRRAPPYFECVCVDTF-DHCPASCNSCVCT	R-S	42
tr B2RG92 B2RG92_9FABA	TDEPSESSKACCDQCACTKSIPP--QCRCSDLRLNSCHSACKSCICT	L-S	92
tr B2RG95 B2RG95_9FABA	TDEPSESSKPCCDQCACTKSIPP--QCHCSDLRLNSCHSACKSCICT	L-S	92
tr B2RGA5 B2RGA5_9FABA	TDEPSESSKACCECACTKSIPP--QCHCSDLRLNSCHSACKSCICT	L-S	92
tr A0JKD0 A0JKD0_9FABA	TDEPSESSKACCDQCACTKSIPP--QCRCSDLRLNSCHSACKSCICT	F-S	92
tr B1ACD1 B1ACD1_SOYBN	-YYVKSTTNGCCDNCRCTISISP--MCKCADIG-ETCHPSCKSCFCD	IPT	92
tr B1GYE5 B1GYE5_9FABA	SDEPSESSEPCCDLCMCADSIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	81
tr A4FS27 A4FS27_DOLBI	-----EPCCDSCRCTKSIPP--QCHCADIRLNSCHSACKSCMCI	R-S	39
tr Q8VX22 Q8VX22_PEA	-----DVKSACCDTCLCTASNPP--TCRCADVG-ETCHSACNSCICA	Y-S	85
tr Q8VX18 Q8VX18_PEA	-----DVKSACCDTCLCTASNPP--TCRCVDVG-ETCHSACNSCICA	Y-S	85
tr Q8W4Y6 Q8W4Y6_LENER	-----DVKSACCDTCLCTRSQPP--TCRCVDVR-ESCHSADKCVCA	Y-S	85
tr Q40329 Q40329_MEDSA	-YDVKSTTTACCNFCPCTRSIPP--QCRCTDIG-ETCHSACKSCLCT	R-S	94

tr Q8RU21 Q8RU21_GLYSO	SYDDDEYSKPCCDLCMCTRSMP--QCSCEDIRLNSCHSDCKSCMCT	R-S	85
tr A0JKC2 A0JKC2_9FABA	TDEPSESSKACCDDECACTKSIPP--QCHCSDLRLNSCHSACKSCICT	L-S	92
tr A4PIB8 A4PIB8_9FABA	-YYVKTTTKACCDLCLCTKSIPP--QCRCADIG-ETCHSACKACLCT	R-S	89
tr Q8VX20 Q8VX20_PEA	-----DVKSACCDTCLCTKSINPP--TCRCVDVG-ETCHSACNSCICAL	L-S	85
tr Q9AVS1 Q9AVS1_PEA	-----NKACCDSCCLCTKSIPP--RCRCNDTG-ETCHSACKTCICT	R-S	85
tr Q8W4Y2 Q8W4Y2_LENCU	-----DVKSACCDTCLCTRSQPP--TCRCVDVR-ESCHSACDKCVCA	Y-S	85
tr Q1WA44 Q1WA44_9FABA	SDEPSESSEPCCDSCRCTKSIPP--QCHCADIRLNSCHSACKSCMCT	R-S	81
tr Q84X86 Q84X86_VIGUS	SDEPSESSEPCCDSCICTKSIPP--QCHCTDIRLNSCHSACKSCMCT	R-S	81
tr Q1W3Z4 Q1W3Z4_9FABA	SDEPSESSEPCCDACICTKSIPP--QCQCTDVRLNSCHSACKSCMCT	R-S	82
tr Q05G15 Q05G15_9FABA	TDEPSESSKACCDHCACTKSIPP--QCRCSDLRLDSCHSACKSCICT	L-S	92
tr A0AQW6 A0AQW6_9FABA	TDEPSESSKPCCDQCACTRSIPP--QCRCSDFRLNSCHSACKSCICT	F-S	92
tr C6SZZ4 C6SZZ4_SOYBN	NDD--DSSKPCCDQCACTKSINPP--QCRCTDMRLNSCHSACKSCICAL	L-S	90
tr A7DZQ6 A7DZQ6_9FABA	SDEPSESSEPCCDHCMCTDSIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	81
tr Q84X87 Q84X87_DOLBI	SDEPSESSEPCCDSCICTESIPP--QCHCTDIRLNSCHSACKSCMCT	R-S	81
tr Q05G14 Q05G14_PHAMA	TDESSESSKACCDHCACTKSIPP--QCRCSDLRLNSCHSACKSCICT	L-S	92
tr A0JKC9 A0JKC9_9FABA	TDEPSESSKACCDQCACTKSIPP--QCRCSDLRLNSCHSACKSCICT	L-S	92
tr B0JFB3 B0JFB3_PHACN	SDEPSESSEPCCDLCVCTDSIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	82
tr Q9SBA9 Q9SBA9_SOYBN	-DD--ESSKPCCDQCACTKSINPP--QCRCSDMRLNSCHSACKSCICAL	---	42
tr Q941H6 Q941H6_DOLBI	TDEPSESSKPCCDQCACTKSIPP--QCRCTDVRLNSCHSACSSCVCT	F-S	84
tr B7FMP4 B7FMP4_MEDTR	---TKSTTTACCDFCPCTRSIPP--QCQCTDVK-EKCHSACKSCLCT	R-S	91
tr Q8VX21 Q8VX21_PEA	-----DVKSACCDTCLCTKSDPP--TCRCVDVG-ETCHSACDSCICAL	L-S	85
tr Q8VX19 Q8VX19_PEA	-----DVKSACCDTCLCTKSINPP--TCRCVDVG-ETCHSACNSCICAL	L-S	85
tr Q4W2W2 Q4W2W2_LENCT	-----NKACCNSCPCTRSIPP--KCSCSDIG-ETCHSACKSCLCT	R-S	85
tr A4VAS0 A4VAS0_PHAAT	SDEPSESSEPCCDHCICTASIPP--ICQCTDIRLNSCHSACKSCMCT	R-S	81
tr Q8RU24 Q8RU24_GLYSO	NDD--ESSKPCCDQCACTKSINPP--QCRCSDMRLNSCHSACKSCICAL	L-S	90
tr Q84X89 Q84X89_VIGSI	SDEPSESSEPCCDSCCKTKSIPP--QCHCTNIRSNSCHSACKSCMCT	R-S	81
tr Q4W2V8 Q4W2V8_9FABA	-----NKACCNSCPCTRSIPP--KCRCTDIG-ETCHSACKSCLCT	R-S	85
tr Q53ZY0 Q53ZY0_SOYBN	NDD--ESSKPCCDQCACTKSINPP--QCRCSDMRLNSCHSACKSCICAL	L-S	83
tr Q1WAK3 Q1WAK3_9FABA	SDEPSESSEPCCDSCRCTKSIPP--QCHCADIRLNSCHSACKSCMCT	R-S	82
tr Q93YY2 Q93YY2_PHAVU	SDEPSESSEPCCDSCICTKSIPP--QCHCTDIRLNSCHSACKSCMCT	R-S	81
tr A0JKC1 A0JKC1_9FABA	TDEPSESSKPCCDHCACTRSIPP--QCRCSDLRLNSCHSACKSCICT	F-S	92
tr B2RG94 B2RG94_9FABA	TDEPSESSKPCCDQCACTKSIPP--QCHCSDLRLNSCHSACKSCICT	F-S	92
tr C6SVG7 C6SVG7_SOYBN	-YYVKSTTKACCNSCPCTKSIPP--QCRCSDIG-ETCHSACKTCICT	R-S	91
tr C6SX26 C6SX26_SOYBN	S--DDESSKPCCDLCMRTASMPP--QCHCADIRLNSCHSACDRCACT	R-S	83
tr Q8W4Y7 Q8W4Y7_LENCU	-----DVKSACCDTCLCTRSQPP--TCRCVDVR-ESCHSACDKCVCA	Y-S	85
tr Q1WAK2 Q1WAK2_9FABA	SDEPSESSEPCCDSCRCTKSIPP--QCHCADIRLNSCHSACKSCMCT	R-S	82
tr Q1W3Z3 Q1W3Z3_9FABA	TDESSESSTPCCDKCACTRSIPP--QCRCSDLRLNSCHSACKSCICT	L-S	84
tr A4Q974 A4Q974_9FABA	SDEPSESSEPCCDLCMCHSIPP--ICQCKDIRLNSCHSACKTCMCT	R-S	81
tr Q941H3 Q941H3_PHALU	TDEPSESSKPCCDHCACTKSIPP--QCRCTDLRLDSCHSACKSCICT	L-S	85

tr Q29Y80 Q29Y80_LENCU	-----ESSEPCCDSCICTKSIPP--QCHCTDIRLNSCHSACKSCMCTR-S	42
tr Q4W2W4 Q4W2W4_LENCO	-----NKACCNSCPCTRSIPP--KCSCSDIG-ETCHSACKSCLCTR-S	85
tr Q4VVG2 Q4VVG2_VIGUN	SDEPSESSEPPCCDSCICTKSIPP--QCHCTDIRLNSCHSACKSCMCTR-S	81
tr A4Q975 A4Q975_9FABA	SDEPSESSEPPCCDLCMCTHSIPP--ICQCKDIRLNSCHSACKTCMCTR-S	80
tr A8KRM8 A8KRM8_9FABA	SDEPSESSEPPCCDLCVCTDSIPP--ICQCTDIRLNSCHSACKTCMCTR-S	81
tr B2RG93 B2RG93_9FABA	TDEPSESSKACCDQCACTKSIPP--QCRCSDLRLNSCHSACKSCICTF-S	92
tr C6SVL8 C6SVL8_SOYBN	NDD--ESSKPCCDQCACTKSNPP--QCRCSDMRLNSCHSACKSCICAL-S	90
tr Q8VX24 Q8VX24_PEA	-----DVKSACCDTCLCTKSNPP--TCRCVDVG-ETCHSACDSCICAL-S	85
tr Q8W4Y1 Q8W4Y1_LENCT	-----DVKSACCDTCLCTRSQPP--TCRCVDVR-ESCHSACDKCVCA-Y-S	85
tr Q9AVS0 Q9AVS0_PEA	-----NKACCDSCCLCTRSIPP--QCQCNDIG-ETCHSACKACLCTR-S	85
tr Q4W2W3 Q4W2W3_LENCT	-----NKACCNSCPCTRSIPP--KCSCSDIG-ETCHSACKSCLCTR-S	85
tr Q4W2W5 Q4W2W5_LENCO	-----NKACCNSCPCTRSIPP--KCSCSDIG-ETCHSACKSCLCTR-S	85
tr Q2VMU0 Q2VMU0_ARAHY	EASSSSDDNVCCNGCLCDRRAPPFFECVCVDTF-DHCPASCNSCVCTR-S	85
tr D6MZ10 D6MZ10_9FABA	SDEPSESSEPPCCDSCRCTKSIPP--QCHCADVRLNSCHSACKSCMCTR-S	81
tr C7BUS0 C7BUS0_LENCU	-----DVKSACCDTCLCTRSQPP--TCRCVDVR-ESCHSACDKCVCA-Y-S	85
	** * .* * * : * * *	

sp P86701 LSI-1	IPPQCR-----FCYK-----		53
sp P83284 IBB1_AMBAC	IPAKCRCFDITD--FCYKPCSG-----		63
sp P01066 IBB1_ARAHY	NPPQCRCTDKTQGRCPVTECRS-----		70
sp P82469 IBB1_DIOGL	MPGLCSCLDITH--FCHEPCKSSGDDDED-----		67
sp P85172 IBB1_LUPAL	FPPQCRCS DITH--FCYKPCTSS-----		63
sp P01058 IBB1_PHAAN	IPAKCFCTDIND--FCYEPCKSSRDDD-WDN-----		82
sp P01055 IBB1_SOYBN	YPAQCFCVDITD--FCYEPCKPSEDDKEN-----		110
sp P83283 IBB2_AMBCE	IPAQCRCFDITD--FCYKPCSG-----		63
sp P01067 IBB2_ARAHY	IPPQCRCTDRTQGRCP LTPCA-----		63
sp Q41066 IBB2_PEA	YPPQCQCFDTHK--FCYKACHNSEVEEVIKN-----		114
sp P01061 IBB2_PHAAN	MPGQCRCLDTHD--FCHKPCKSRDKD-----		78
sp P01060 IBB2_PHAVU	MPGKCRCLD TTD--YCYKSCKSSGEDDD-----		107
sp P01057 IBB3_DOLAX	IPAQCVCVDMKD--FCYAPCKSSHDD-----		76
sp P81484 IBB3_PHAVU	IPAQCIC TDTNN--FCYEPCKSSHGPB-BNN-----		85
sp P01059 IBB4_DOLAX	EPAQCFCVD TTD--FCYKSCHNN-AEKD-----		76
sp P16343 IBB4_LONCA	DPGMCSCLDVTD--FCYKPCCKSSGDDDDZZ-----		80
sp Q41065 IBBA_PEA	NPPKCQCFDTHK--FCYKACHNSEVEEVIKN-----		96
sp P81483 IBB4_PHAVU	IPAQCIC TDTNN--FCYEPCKSSHGPB--NN-----		85
sp P56679 IBBB_PEA	NPPKCQCFDTQK--FCYKACHNSELEEVIKN-----		72
sp P01064 IBBD2_SOYBN	QPGQCRCLD TND--FCYKPCCKSRDD-----		83
sp P01063 IBBC2_SOYBN	MPGQCRCLD TTD--FCYKPCCKSSDEDDDD-----		83

sp P16346 IBBWT_MEDSA	IPPQCHCADITN--FCYPKCN-----	58
sp Q9S9E3 IBB_DOLBI	IPAQCVCVDMKD--FCYAPCKSSHDD-----	76
sp P81705 IBB_ERYVA	YPAQCHCLDQNT--FCYDKCDSDS-----	61
sp Q8W4Y8 IBB_LENCU	NPPQCQCYPDTHK--FCYKACHNSEIEE-----	110
sp P80321 IBB_MEDSC	FPPQCRCYDITD--FCYPSCS-----	62
sp P83311 IBB_PHAAT	IPAQCVCTDTND--FCYEPCKSGHDDDDSG-----	80
sp P01062 IBB_PHAAU	MPGKCRCLDTDD--FCYKPCESMDKD-----	72
sp P01056 IBB_PHALU	IPAQCVCBBIBD--FCYEPCKSSHSDDDNNN-----	83
sp P01065 IBB_VICAN	NPPQCQCQFDTHK--FCYKACHSSEKEEVIKN-----	72
sp P24661 IBB_VICFA	NPPKCQCQFDTHK--FCYKSCHN-----	63
sp P17734 IBB_VIGUN	IPAZCFCGBIBB--FCYKPCKSSHsBBBBWN-----	83
tr Q7X973 Q7X973_ARAHY	NPPQCRCTDKTQGRCPVTECRS-----	80
tr Q43709 Q43709_SOYBN	QPGQCRCLDTND--FCYKPCSKSRDD-----	102
tr Q4W2W0 Q4W2W0_LENCU	IPPQCRCTDVTN--FCYKNCN-----	104
tr Q1WA43 Q1WA43_VIGUN	MPGKCRCLDIAD--FCYKPCSKSRDEDDE-----	107
tr Q7Y1U3 Q7Y1U3_PHAAU	MPGKCRCLDTDD--FCYKPCESMDKDDD-----	107
tr Q4W2W7 Q4W2W7_LENCU	IPPQCRCTDVTN--FCYKNCN-----	104
tr A8KRM2 A8KRM2_9FABA	MPGKCRCLDTTD--YCYKSCKSSGEDDD-----	107
tr A4Q9H3 A4Q9H3_9FABA	MPGKCRCLDTTD--YCYKSCKSSGEDDD-----	107
tr Q9M3X3 Q9M3X3_PEA	NPPKCQCQFDTHK--FCYKACHNSEVEEVIKN-----	114
tr Q40330 Q40330_MEDSA	YPPQCRCTDITN--FCYPKCN-----	113
tr Q8VX09 Q8VX09_PEA	YPPKCQCQFDTQK--FCYKACHNSELEEVIKN-----	114
tr Q9AVS2 Q9AVS2_PEA	LPPQCRCIDITD--FCYEKCN-----	104
tr Q84X88 Q84X88_VIGSI	TPGKCRCLDIAD--FCYKPCSKSRDEDDE-----	107
tr Q84X85 Q84X85_VIGUS	MPGKCRCLDIAD--FCYKPCSKSRDEDDE-----	107
tr A4Q9H4 A4Q9H4_PHAMA	MPGKCRCLDTTD--FCYKSCKSSGEDDD-----	107
tr Q941H5 Q941H5_VIGMU	IPAQCYCADIND--FCYEPCK-----	104
tr Q6PWT2 Q6PWT2_VIGUN	MPGKCRCLDIAD--FCYKPC-----	99
tr Q8VX10 Q8VX10_PEA	YPPQCQCQFDTQK--FCYKACHNSEVEEVIKN-----	114
tr Q8W4Y3 Q8W4Y3_9FABA	NPPQCQCYPDTHN--FCYKTCH-----	104
tr Q6A4J9 Q6A4J9_MEDSC	FPPQCRCYDITD--FCYPSCS-----	110
tr Q4W2W6 Q4W2W6_LENCO	IPPQCRCTDVTN--FCYKNCN-----	104
tr Q4W2V9 Q4W2V9_LENENR	IPPQCRCTDVTN--FCYKNCN-----	104
tr Q05G17 Q05G17_PHALU	IPAQCVCNDIND--FCYEPCKSSHDDDD-SDN-----	120
tr A4Q977 A4Q977_PHACN	MPGKCRCLDTTD--YCYKSCKSSGEDDD-----	108
tr A4Q9H5 A4Q9H5_9FABA	IPGTCRCLDTTD--FCYKSCKSSGEDDD-----	107
tr A4Q978 A4Q978_PHACN	MPGKCRCLDTTD--YCYKSCKSSGEDDD-----	108
tr Q8RU23 Q8RU23_GLYSO	YPAQCFCVDITD--FCYEPCKPSEDDKENY-----	118
tr A4Q973 A4Q973_9FABA	LPGKCRCLDTTD--NCYKSCKSSGEDDD-----	107

tr Q05G16 Q05G16_9FABA	IPAQCICTDIND--FCHEPCKSSHDDDD-SDN-----	120
tr A8KRN4 A8KRN4_9FABA	MPGKCRCLDTTD--FCYKSCKSSGEDDD-----	107
tr B1ACD4 B1ACD4_SOYBN	IPPQCHCSDITN--FCYEPCNSS-ETEAH-----	117
tr Q9S9H8 Q9S9H8_VIGUN	IPAQCFCGDIND--FCYKPCKSDSHDD-----	78
tr Q1W3Z5 Q1W3Z5_VIGMU	IPAQCYCADIND--FCYEPCKSSHDDDD-WDN-----	113
tr A4Q976 A4Q976_PHACN	MPGKCRCLDTTD--YCYKSCKSSGEDDD-----	107
tr A4Q9H2 A4Q9H2_9FABA	MPGKCRCLDTTD--FCYKSCKSSGEDDD-----	107
tr B2RGA4 B2RGA4_9FABA	IPAQCVCTDIND--FCYEPCKPSHDDDD-SDN-----	120
tr Q8RU22 Q8RU22_GLYSO	MPGQCRCLDTTD--FCYKPCKSSDEDDDD-----	109
tr Q8VX23 Q8VX23_PEA	NPPKCQCFDTHK--FCYKACH-----	104
tr Q84LF5 Q84LF5_9FABA	YPAQCFCVDITD--FCYEPCKPSEDDKEN-----	111
tr Q0PKR5 Q0PKR5_ARAHY	NPPQCRCTDKTQGRCPVTECRS-----	64
tr B2RG92 B2RG92_9FABA	LPAQCVCTDIDD--FCYEPCKSSHDDDDSDNK-----	122
tr B2RG95 B2RG95_9FABA	IPAQCVCTDIND--FCYEPCKSSHDDDD-SDN-----	120
tr B2RGA5 B2RGA5_9FABA	IPAQCVCTDIDE--FCYEPCKSSHDDDD-LDNK-----	121
tr A0JKD0 A0JKD0_9FABA	IPAQCVCTDIND--FCYEPCKPSHDDDD-SDN-----	120
tr B1ACD1 B1ACD1_SOYBN	FPGLCQCIDVTN--FCYELCNSS-ETKAH-----	118
tr B1GYE5 B1GYE5_9FABA	MPGTCRCLDTTD--FCYKSCKSSGEDDD-----	107
tr A4FS27 A4FS27_DOLBI	MPGKCRCLDTDD--FCYKPCKSR-----	60
tr Q8VX22 Q8VX22_PEA	NPPKCQCFDTHK--FCYKACH-----	104
tr Q8VX18 Q8VX18_PEA	NPPKCQCFDTHK--FCYKACH-----	104
tr Q8W4Y6 Q8W4Y6_LENER	NPPQCQCYPDTHN--FCYKTCH-----	104
tr Q40329 Q40329_MEDSA	IPPQCRCTDITN--FCYPKCN-----	113
tr Q8RU21 Q8RU21_GLYSO	QPGQCRCLDTND--FCYKPCKSRDD-----	108
tr A0JKC2 A0JKC2_9FABA	IPAQCVCTDIDD--FCYEPCKSSHDDDD-SDNK-----	121
tr A4PIB8 A4PIB8_9FABA	FPPQCRCADGND--FCYEPCKSSFEGEAH-----	116
tr Q8VX20 Q8VX20_PEA	YPPQC-----	90
tr Q9AVS1 Q9AVS1_PEA	LPPQCRCIDITD--FCYEKRNQPASKPTINHVMDLNLQQTIKGQWLTCTV	133
tr Q8W4Y2 Q8W4Y2_LENCU	NPPQCQCYPDTHN--FCYKTCH-----	104
tr Q1WA44 Q1WA44_9FABA	MPGKCRCLDTDD--FCYKPCESMKD KDD-----	107
tr Q84X86 Q84X86_VIGUS	MPGKCRCLDIAD--FCYKPCKSRDEDDE-----	107
tr Q1W3Z4 Q1W3Z4_9FABA	MPGQCRCLDVAD--FCYKPCKSRDEDDE-----	108
tr Q05G15 Q05G15_9FABA	IPAQCVCTDIND--FCYKPCKSSHDDDD-SDN-----	120
tr A0AQW6 A0AQW6_9FABA	IPAQCVCTDIND--FCYEPCKPSHDDDD-SDN-----	120
tr C6SZZ4 C6SZZ4_SOYBN	YPAQCFCVDITD--FCYEPCKPSEDDKENY-----	118
tr A7DZQ6 A7DZQ6_9FABA	MPGKCRCLDTTD--FCYKSCKSSGEDDD-----	107
tr Q84X87 Q84X87_DOLBI	MPGKCRCLDIAD--FCYKPCKSRDEDDE-----	107
tr Q05G14 Q05G14_PHAMA	IPAQCVCTDIND--FCYEPCKSSHDDDD-SDN-----	120
tr A0JKC9 A0JKC9_9FABA	IPAQCVCTDIND--FCYEPCKPSHDDDD-SDN-----	120

tr B0JFB3 B0JFB3_PHACN	MPGKCRCLDTTD--YCYKSCSSGEDDD-----	108
tr Q9SBA9 Q9SBA9_SOYBN	-----	
tr Q941H6 Q941H6_DOLBI	IPAQCVCVDMKD--FCYEPCK-----	103
tr B7FMP4 B7FMP4_MEDTR	FPPQCRCYDITN--FCYSSCS-----	110
tr Q8VX21 Q8VX21_PEA	YPPQCQCFDTHK--FCYKACH-----	104
tr Q8VX19 Q8VX19_PEA	YPPKCQCFDTQK--FCYKACH-----	104
tr Q4W2W2 Q4W2W2_LENCT	IPPQCRCTDVNTN--FCYKNCN-----	104
tr A4VAS0 A4VAS0_PHAAT	MPGKCRCLDTTD--FCYKSCSSGEDDD-----	107
tr Q8RU24 Q8RU24_GLYSO	YPAQCFCVDITD--FCYEPCKPSQDDKENY-----	118
tr Q84X89 Q84X89_VIGSI	MPGKCRCLDIAD--FCYKPCSKRDEDE-----	107
tr Q4W2V8 Q4W2V8_9FABA	IPPQCRCTDVNTN--FCYKNCN-----	104
tr Q53ZY0 Q53ZY0_SOYBN	YPAQCFCVDITD--FCYEPCKPSEDDKEN-----	110
tr Q1WAK3 Q1WAK3_9FABA	MPGKCRCLDITN--FCYKPCESRDKDDD-----	108
tr Q93YY2 Q93YY2_PHAVU	MPGKCRCLDIAD--FCYKPCSKRDEDE-----	107
tr A0JKC1 A0JKC1_9FABA	IPAQCLCTDIND--LCYEPCKSSHDDD-SDN-----	120
tr B2RG94 B2RG94_9FABA	IPAQCVCCTDIND--FCYEPCKPSHDDD-SDN-----	120
tr C6SVG7 C6SVG7_SOYBN	IPPQCHCSDITN--FCYEPKNSS-ETEAH-----	117
tr C6SX26 C6SX26_SOYBN	MPGQCRCLDITD--FCYKPCSKSDEDD-----	109
tr Q8W4Y7 Q8W4Y7_LENCT	NPPQCQCYDTHN--FCYKTCH-----	104
tr Q1WAK2 Q1WAK2_9FABA	RPGKCRCLDITD--FCYKPCSKMDEDDV-----	108
tr Q1W3Z3 Q1W3Z3_9FABA	IPAQCVCCTDIND--FCYKPCSKSSHDDD-SDN-----	112
tr A4Q974 A4Q974_9FABA	MPGKCHCLDITD--FCYKSCSSGEDDD-----	107
tr Q941H3 Q941H3_PHALU	IPAQCVCNDIND--FCYEPCK-----	104
tr Q29Y80 Q29Y80_LENCT	MPGKCRCLDIAD--FCYKPC-----	60
tr Q4W2W4 Q4W2W4_LENCT	IPPQCRCTDVNTN--FCYKNCN-----	104
tr Q4VVG2 Q4VVG2_VIGUN	MPGQCRCLD-----	90
tr A4Q975 A4Q975_9FABA	MPGKCRCLDITD--FCYKSCSSGEDDD-----	106
tr A8KRM8 A8KRM8_9FABA	MPGKCRCLDITD--FCYKSCSSGEDDD-----	107
tr B2RG93 B2RG93_9FABA	IPAQCVCCTDIDD--FCYEPCKPSHDDD-SDN-----	120
tr C6SVL8 C6SVL8_SOYBN	YPAQCFCVDITD--FCYEPCKPSEDDKENY-----	118
tr Q8VX24 Q8VX24_PEA	YPPKCQCFDTHK--FCYKACH-----	104
tr Q8W4Y1 Q8W4Y1_LENCT	NPPQCQCYDTHN--FCYKTCH-----	104
tr Q9AVS0 Q9AVS0_PEA	LPPKCSCTDITD--FCYKNCN-----	104
tr Q4W2W3 Q4W2W3_LENCT	IPPQCRCTDVNTN--FCYKNCN-----	104
tr Q4W2W5 Q4W2W5_LENCT	IPPQCRCTDVNTN--FCYKNCN-----	104
tr Q2VMU0 Q2VMU0_ARAHY	NPPQCRCTDKTQGRCPVTECRS-----	107
tr D6MZ10 D6MZ10_9FABA	MPGKCRCLDIDD--FCYKPCESMDKDDD-----	107
tr C7BUS0 C7BUS0_LENCT	NPPQCQCYDTHK--FCYKACHNSEIEELIKY-----	114