

Supplemental Figure 1

D39- PspC3 -----  
HU1- PspC6 -----  
HU3- PspC8 -----  
HU4- PspC3 -----  
HU5- PspC3 -----  
HU6A- PspC3 -----  
HU6B- PspC4 -----  
HU6B- PspC10 1 TEREGSTQAATSSKMANESQIERRKAAEQAIVSLSGYMTSLNDGLDTSRFEELLKRAKGIVEEYRKKIDGASDREKI 80  
HU7F- PspC6 -----  
HU9V- PspC3 -----  
HU14- PspC3 -----  
HU18C- PspC6 -----  
HU19A- PspC5 -----  
HU19F- PspC9 -----  
HU23F- PspC3 -----

D39- PspC3 -----  
HU1- PspC6 -----  
HU3- PspC8 -----  
HU4- PspC3 -----  
HU5- PspC3 -----  
HU6A- PspC3 -----  
HU6B- PspC4 -----  
HU6B- PspC10 81 EKLQQEGQTKLDELVDKFKKGLSSSEQNGHATPKDPSRNDGVQGDDSSVGQGEQPGASNQKNPESVPPTASGETDSPTKP 160  
HU7F- PspC6 -----  
HU9V- PspC3 -----  
HU14- PspC3 -----  
HU18C- PspC6 -----  
HU19A- PspC5 -----  
HU19F- PspC9 -----  
HU23F- PspC3 -----

D39-	PspC3	1	-----TENEGS	6
HU1-	PspC6	1	-----EGVGG	5
HU3-	PspC8	1	-----TENEGS	6
HU4-	PspC3	1	-----TEKEVT	6
HU5-	PspC3	1	-----TEN	3
HU6A-	PspC3	1	-----TENEGS	6
HU6B-	PspC4	1	-----EGVRS	5
HU6B-	PspC10	161	KTSNDSVNSLERELKEVKETAKTTLNTYMLTRLKQENPGVFWFADLLRESKESVEKYKRMFDEASSKENVENLVKEAQE	240
HU7F-	PspC6	1	-----EGVRS	5
HU9V-	PspC3	1	-----TEKEVT	6
HU14-	PspC3	1	-----TEKEVT	6
HU18C-	PspC6	1	-----EEVGG	5
HU19A-	PspC5	1	-----TENEGI	6
HU19F-	PspC9	1	-----TEKEGS	6
HU23F-	PspC3	1	-----TENEGS	6

D39-	PspC3	7	TQAATSSNMA---KT-----EHRKAAKQV-----VDEYIEKMLREIQ--LDRRK--HTQNVALNKL <del>SAIKT</del>	61
HU1-	PspC6	6	RNTSTVTSSGQD-----TSKKYADEV-----KSHYQSILEKVRKSLEKDR--HTQNVGLITKLSEIKK	61
HU3-	PspC8	7	TQAATFSNMANKSQTEQ-GQINIERDKAKTAV-----SEYKEKKVSEIYTKLERDR--HKDTVDLVNKLQEIKN	72
HU4-	PspC3	7	TQVATSSNKANKSQT-----EHMKAAKQV-----DEYIKKKL---Q--LDRRK--HTQNVGLLTKLGVIKT	60
HU5-	PspC3	4	EGTTQVATSSNK-----ANKSQTEHM-----KAAKQ-VDEYIKKMLQLDRRKHTQNVGLLTKLGAIKT	60
HU6A-	PspC3	7	TQAATSSNMA---KT-----EHRKAAKQV-----VDEYIEKMLREIQ--LDRRK--HTQNF <del>AFNMKLSAIKT</del>	61
HU6B-	PspC4	6	KNNLTVTSSGQD-----ISKKYADEV-----ESHLQSILKDVNKNLKKVQ--HTQNVDFNKKLSRIKT	61
HU6B-	PspC10	241	IEALVVKHKGR-----EIDLERTKAKTVI-----AKYLTGLLDDIKKNLKKKEQ--HINTVELIKKLGDIKR	299
HU7F-	PspC6	6	GNNSTVTSSG---QD-----ISKKYADEV-----KSHLEKILSEIQTNLDRSK--HIKTVNLINKLQDIKR	61
HU9V-	PspC3	7	TQVATSSNKANKSQT-----EHMKAAKQV-----DEYIKKKL---Q--LDRRK--HTQNVGLLTKLGVIKT	60
HU14-	PspC3	7	TQVATSSNKANKSQT-----EHMKAAKQV-----DEYIKKKL---Q--LDRRK--HTQNVGLLTKLGVIKT	60
HU18C-	PspC6	6	RNTPTVTSSG---QD-----ISKKYADEV-----KSHLEEMLSGIK--LDRRK--HTQNFNFNKKLSIIQT	59
HU19A-	PspC5	7	TQVATSYNKANESQT-----EHRKAAKQVDEDIKKMLSEIQEYIKKMLSEIQ--LDRRK--HTQNVNINRKL <del>SAIQT</del>	74
HU19F-	PspC9	7	TQAATSFNRGNQSQAQEQRGELDLERDKAMKAV-----SEYVGKMRDAYVKSDRKR--HKNTVALV <del>NQIGNIKN</del>	73
HU23F-	PspC3	7	TQAATSSNMA---KT-----EHRKAAKQV-----VDEYIEKMLREIQ--LDRRK--HTQNF <del>AFNMKLSAIKT</del>	61

D39- PspC3 62 KYLRELNVL---EESKDE-LPSEIKAKLDAAFEKFKKDTL--KPGEKVAEAKKKVVEEAKKKAEDQKEEDRRNYPTNTYK 135  
 HU1- PspC6 62 KYLYELEVNVLLEEKSKAE-LPSKAKAELDAAFEQFKKEP----- 100  
 HU3- PspC8 73 EYLNKIVEST--SKIEIQG-LITTSRSLDEAVSKYKKAPS-----SSSS----- 115  
 HU4- PspC3 61 EYLNHGLSVS---KKKSEAE-LPSEIKAKLDAAFEQFKKDTLPTEPGKKVAEAEKKVVEEAKKKAEDQKEKDLRNYPTNTYK 136  
 HU5- PspC3 61 EYLNHGLSVS---KEKSEAE-LPSKIKAE LDAAFENFKKDTL----- 97  
 HU6A- PspC3 62 EYLYGL-----KEKSEAE-LPSEVKAKLDAAFEQFKKDTL--KLGEKVAEAEKKVAEAEKKAKAQKEGDRRNYPTITYK 132  
 HU6B- PspC4 62 KYLYGLKEKS---EAELTL-KTKETKEELTAAFEQFKKDTL-----KSGKKVAEAEKKAKAQKEEDRRNYPTNTYK 128  
 HU6B- PspC10 300 TYLYKFDEST--QKAQLQE-LVTESQSKLDEAFSKFKNGLS-----SSSS----- 342  
 HU7F- PspC6 62 TYLYELNVL---EDKSKAE-LPSKIKAKLDAAFEQFKKDTLPTEPGKKVAEAKKKVVEEAKKAKAQKEEDHRNYPTITYK 137  
 HU9V- PspC3 61 EYLNHGLSVS---KKKSEAE-LPSEIKAKLDAAFEQFKKDTLPTEPGKKVAEAEKKVVEEAKKKAEDQKEKDLRNYPTNTYK 136  
 HU14- PspC3 61 EYLNHGLSVS---KKKSEAE-LPSEIKAKLDAAFEQFKKDTLPTEPGKKVAEAEKKVVEEAKKKAEDQKEKDLRNYPTNTYK 136  
 HU18C-PspC6 60 KYFYELNVL---KEKSKKEELTSKTKEELTAAFEKFKKDTLKL--GEKVAEAEKKVAEAEKKAKAQKEEDRRNYPTNTYK 134  
 HU19A-PspC5 75 KYLYELRVL---KEKSKKEELTSKTKEELDAAFEKFKKEP-----ELTKKLAEAKQKAKAQKEEDFRNYPTNTYK 141  
 HU19F-PspC9 74 RYLNEIVHST--SKSQLQE-LMMKSQSEVDEAVSKFEKDSF-----SSSS----- 116  
 HU23F-PspC3 62 EYLYGL-----KEKSEAE-LPSEVKAKLDAAFEQFKKDTL--KLGEKVAEAEKKVAEAEKKAKAQKEEDRRNYPTITYK 132

D39- PspC3 136 TLELEIAEFDVKVKEAELELVKKEEAKE--SRNEGTIKQAKEKVESKK-----AEATRLENIKTDRKKAEE 198  
 HU1- PspC6 -----  
 HU3- PspC8 -----  
 HU4- PspC3 137 TLELDIAESDVEVKKAELELVKKEEAKE--SRDEKKINQAKAKVENKK-----AEATRLKNIKTDREKAE 199  
 HU5- PspC3 -----  
 HU6A- PspC3 133 TLDLEIAESDVEVKKAELELLKKEEAK---TRNKDTINQAKAKVESKQ-----AEATRLKKIKTDREQAET 194  
 HU6B- PspC4 129 TIELEIAEAEVGVAKAELELEFAQAQVQIPQDTEKINAASKVEAAK-----SNVKKLEKIKSDIEKTYL 193  
 HU6B- PspC10 -----  
 HU7F- PspC6 138 TLEPEIAESDVKVKEAELELVKKEADE--SRNEGTINQAKAKVESEQ-----AEATRLKKIKTDREKAE 200  
 HU9V- PspC3 137 TLELDIAESDVEVKKAELELVKKEEAKE--SRDEKKINQAKAKVENKK-----AEATRLKNIKTDREKAE 199  
 HU14- PspC3 137 TLELDIAESDVEVKKAELELVKKEEAKE--SRDEKKINQAKAKVENKK-----AEATRLKNIKTDREKAE 199  
 HU18C-PspC6 135 TLELEIAESDGEVKKAELELLKKEA-K--TRNEDTINQAKAKVESKQ-----AEATRLKIKTERKEAEE 196  
 HU19A-PspC5 142 TLELEIAEFDVKVKEAELELVKKEEAK---PRNEEKIKQAKAKVESKKAATRLLEEIKTERKKAEEEAERKAESEKKAEE 218  
 HU19F-PspC9 -----  
 HU23F-PspC3 133 TLDLEIAESDVEVKKAELELLKKEEAK---TRNKDTINQAKAKVESKQ-----AEATRLKKIKTDREQAET 194

D39-	PspC3	199	EA-----KRRADAKLKE-----ANVATSDQGKPKGRAKRGVPGELATP	236
HU1-	PspC6		-----	
HU3-	PspC8	116	---GSSTKPE-TPQ-RKHQN-----	130
HU4-	PspC3	200	-A-----KRRADAKLQE-----ANVATSEQDKSKRRRAKREVLGELATP	236
HU5-	PspC3		-----	
HU6A-	PspC3	195	TR-----LENIKTDRKK-----AEEEAKVKAKPKKRTKRGALGEPATP	232
HU6B-	PspC4	194	YKLDNSTKET--PKPRVRRN-----SP---EIKAKGRVKNYEE-----ANIE-----LSKYMTD	237
HU6B-	PspC10	343	---GSSTKPE-TPQPEKPEH-----	358
HU7F-	PspC6	201	EA-----KRRADAKEQD-----ESKRRKSRGKRGALGEQATP	232
HU9V-	PspC3	200	-A-----KRRADAKLQE-----ANVATSEQDKSKRRRAKREVLGELATP	236
HU14-	PspC3	200	-A-----KRRADAKLQE-----ANVATSEQDKSKRRRAKREVLGELATP	236
HU18C-	PspC6	197	EA-----KRRADAKLQE-----ANVATSEQEPKRRVKRGALGEQATP	234
HU19A-	PspC5	219	AKQKVDTKEQGKPKRRAKRGVSGELATPDKKENDAKSSDSSVGEETLPSPSLNMANESQTEHRKDVDEYIKKMLGEIQLD	298
HU19F-	PspC9	117	---GSSTKPE-TPQPENPEH-----	132
HU23F-	PspC3	195	TR-----LENIKTDRKK-----AEEEAKVKAKPKKRTKRGALGEPATP	232

D39-	PspC3	237	DKK-----ENDAKSSDSSVGEETLPSS-----SLKSGKKVAEAEKKVEEAEKKAKDQ	283
HU1-	PspC6	101	-----ELTKKVAEAQKKVEEAKKKAEDQ	123
HU3-	PspC8		-----	
HU4-	PspC3	237	DKK-----ENDARSSDSSVGEETLTSP-----SLKPEKKVAEAEKKVEEAKKKAEDQ	283
HU5-	PspC3	98	-----KPGEKVAEAKKKVEEAKKKAEDQ	120
HU6A-	PspC3	233	DKK-----ENDAKSSDSSVGEETLPSP-----SLKPGKKVAEAEKKVEEAEKKAKDQ	279
HU6B-	PspC4	238	LYK-----LDNSTKETPKSRVRRN--SP-----QVGDSRELKET---IDKAKETLSTY	280
HU6B-	PspC10		-----	
HU7F-	PspC6	233	DKK-----ENDAKSSDSSVGEETLPSP-----SLKPGKKVAEAEKKVEEAEKKAKAQ	279
HU9V-	PspC3	237	DKK-----ENDAKSSDSSVGEETLTSP-----SLKPEKKVAEAEKKVEEAKKKAEDQ	283
HU14-	PspC3	237	DKK-----ENDAKSSDSSVGEETLTSP-----SLKPEKKVAEAEKKVEEAKKKAEDQ	283
HU18C-	PspC6	235	DKK-----ENDAKSSDSSVGEETLPSP-----SLKPEKKVAEAEKKVAEAEKKAKAQ	281
HU19A-	PspC5	299	RRKHTQNVNLNIKLSAIKTKYLYELSVLKENSKEELTSKTKAELTAAFEQFKKDTLKPEKKVAEAEKKVEEAKKKAEDQ	378
HU19F-	PspC9		-----	
HU23F-	PspC3	233	DKK-----ENDAKSSDSSVGEETLPSP-----SLKPGKKVAEAEKKVEEAEKKAKGQ	279

D39-	PspC3	284	KEEDRRNYPTNTYKTLDLLEIAESDVKVKEAELELVKEEAKEPRDEEKI-KQAKAKVESKKAETRLENIKTDRKKAE--E	360
HU1-	PspC6	124	KEEDFRNYPTNTYKTIELEIAESDVKVKEAELELLKEEAKEHRDEGTI-KQVEEKVKSEKAEATRLEKIKTERKKA---E	199
HU3-	PspC8	131	-----QRLNQE-----	136
HU4-	PspC3	284	KEEDRRNYPTNTYKTLELEIAESDVEVKKAELELVKEEAKESRNEEKI-KQVKAKVESKKAETRLENIKTDRKKAE-EE	361
HU5-	PspC3	121	KEEDRRNYPTNTYKTLELEIAEFDVKVKEAELELVKEEAKEPRDEEKI-KQAKEKVESKKAETRLEKIKTDRKKA---E	196
HU6A-	PspC3	280	KEEDRRNYPTITYKTLELDIAESDVEVKKAELELVKEEAKESRDKEKI-KQAKAEVESKKAETRLEKIKTDRKKAE-EE	357
HU6B-	PspC4	281	MVTRLTKLDPSVFWFADLLM---DAKKVVEEYKTKLEDASDKKSVEDLRKEAEGKIESLIVTHQNREKENQPAPQPGGQA	357
HU6B-	PspC10	359	-----QKPTTPAP-----	366
HU7F-	PspC6	280	KEEDRRNYPTNTYKTLELEIAESDVKVKEAELELVKEEAKESRNEEKI-KQEKAKVESKKAETRLEKIKTDRKKA---E	355
HU9V-	PspC3	284	KEEDRRNYPTNTYKTLELEIAESDVEVKKAELELVKGEAKESRNEEKI-KQVKAKVESKKAETRLENIKTDRKKAE-EE	361
HU14-	PspC3	284	KEEDRRNYPTNTYKTLELEIAESDVEVKKAELELVKEEAKESRNEEKI-KQVKAKVESKKAETRLENIKTDRKKAE-EE	361
HU18C-	PspC6	282	KEEDRRNYPTNTYKTLELEIAGSDVEVKKAELELVKEEAKEPRNEEKV-KQAKAEVESKQAEATRLEKIKTDRKKAE--E	358
HU19A-	PspC5	379	KEEDRRNYPTNTYKTLELEIAESDVRVKEAELELVKEEASESRNEEKI-KQAKEKVESKKAETRLEKIKTDRKKAE--E	455
HU19F-	PspC9	133	-----QKPTTPSP-----	140
HU23F-	PspC3	280	KEEDRRNYPTITYKTLELDIAESDVEVKKAELELVKEEAKESRDKEKI-KQAKAEVESKKAETRLEKIKTDRKKAE-EE	357

D39-	PspC3	361	EAKRKAEEEDK---VKEK-----	375
HU1-	PspC6	200	EAKRKAEEEDK---VKEK-----	214
HU3-	PspC8		-----	
HU4-	PspC3	362	EAKRRAAEEEDK---VKEK-----	376
HU5-	PspC3	197	EAKRKAEEEDK---VKEK-----	211
HU6A-	PspC3	358	EAKRKAEEEDK---VKEK-----	372
HU6B-	PspC4	358	GGSMVPPVVTQTPPSTSQSPGQK--ATEAEKKKLQDLIRQFQEALNKLD--DEAKTVPDGAKLTGEAGKAYNETRITYAKE	433
HU6B-	PspC10		-----	
HU7F-	PspC6	356	EAKRKAEEEDK---VKEK-----	370
HU9V-	PspC3	362	EAKRRAAEEEDK---VKEK-----	376
HU14-	PspC3	362	EAKRRAAEEEDK---VKEK-----	376
HU18C-	PspC6	359	EAKRKAEEEDK---VKEK-----	373
HU19A-	PspC5	456	EAKRKAEESEKKAEEAKQKVDAAEFYALEAKIAELEYEVQRPEKELKEIDESDSEDYLKEGLRAPLQSKLDTKKAKLSKLE	535
HU19F-	PspC9		-----	
HU23F-	PspC3	358	EAKRKAEEEDK---VKEK-----	372

D39-	PspC3	-----	
HU1-	PspC6	-----	
HU3-	PspC8	-----	
HU4-	PspC3	-----	
HU5-	PspC3	-----	
HU6A-	PspC3	-----	
HU6B-	PspC4	434 VVDKSKKLLSQTAVTMDDELAMQLTKLNDAMSKLKEAKAKLVPEVKPQPENPEPKPQPEGEKPSVPDINQEKEKAKLAIAT	513
HU6B-	PspC10	367 -----DTKPSPQPEGKKPSVPDINQEKEKAKLAVAT	397
HU7F-	PspC6	-----	
HU9V-	PspC3	-----	
HU14-	PspC3	-----	
HU18C-	PspC6	-----	
HU19A-	PspC5	536 ELSDKIDELDAEIAKLEVQLKDAEGNNNVEAYFKEGLEKTTAEKKAELEKAEADLKKAVDE-----	596
HU19F-	PspC9	141 -----DTKPSPQPEGKKPSVPDINQEKEKAKLAVVT	171
HU23F-	PspC3	-----	

D39-	PspC3	-----	
HU1-	PspC6	-----	
HU3-	PspC8	-----	
HU4-	PspC3	-----	
HU5-	PspC3	-----	
HU6A-	PspC3	-----	
HU6B-	PspC4	514 YMSKILDDIKKHHLRKEKHHQIVALIKDLKDKKKQALSEIDNVNTKVEIENTVHKVFAAMDTVVTKFQKGLIQNTPQV--	591
HU6B-	PspC10	398 YMSKILDDIQKHHLQKEKHRQIVALIKELDELKKQALSEIDNVNTKVEIENTVHKIFADMDAVVTKFKKGLTQDTPKEPG	477
HU7F-	PspC6	-----	
HU9V-	PspC3	-----	
HU14-	PspC3	-----	
HU18C-	PspC6	-----	
HU19A-	PspC5	-----	
HU19F-	PspC9	172 YMSKILDDIQKHHLQKEKHRQIVALIKELDELKKQALSEIDNVNTKVEIENTVHKIFADMDAVATKFKKGLTQDTPKEPG	251
HU23F-	PspC3	-----	

D39-	PspC3	-----	
HU1-	PspC6	-----	
HU3-	PspC8	-----	
HU4-	PspC3	-----	
HU5-	PspC3	-----	
HU6A-	PspC3	-----	
HU6B-	PspC4	-----	
HU6B-	PspC10	478 NKKPSAPKPGMQPSPQ	493
HU7F-	PspC6	-----	
HU9V-	PspC3	-----	
HU14-	PspC3	-----	
HU18C-	PspC6	-----	
HU19A-	PspC5	-----	
HU19F-	PspC9	252 NKKPSA-----	257
HU23F-	PspC3	-----	