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	10	20	30	40			70	80	90	100		120
MG682506 Sangju pear	MSLEDVLOOARRHRVG											
MG682507 Namyangju pear	MS LED V LQUARRIEVO											
MG682507 Nallyangju pear MG682508 Ulsan pear												
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MG682509 Cheonan pear												
MG682510 Naju pear												
GQ330294 China pear												
KR606324 Korea apple												
JX885582 China apple												
KR815877 India apple												
LC086300 Korea pear												
KF735124 China apple												
LN90143 India apple												
JN792491 Korea pear												
KX668488 Brazil apple	······											
LC184610 Japan citrus												
KX988001 China Actinidia		v	•••••	5B		•••••	•••••	•••••	N	DR	.s	
	130	140	150	160			190	200	210	220	230	
MG682506 Sangiu near	130    . DLSNA/DELETEAATS					1	1					
MG682506 Sangju pear MG682507 Namyangju pear	DLSNVVPELKTFAATS	RONSLNECTFRE	LCEPFADLA	REFLHERWSKG	LATNIYKKWP	AFEKSPWVAF	DFATGLKMN	RLTPDEKOVI	DRMTKRLFR	TEGORGVEE	GSESNLELEG	
MG682507 Namyangju pear	DLSNVVPELKTFAATS	RQNSLNECTFRE	LCEPFADLA	REFLHERWSKG	LATNIYKKWP	AFEKSPWVAF	DFATGLKMN	RLTPDEKUVJ	DRMTKRLFR	TEGORGVEEA	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear	DLSNVVPELKTFAATS	RONSLNECTFRE	LCEPFADLA	REFLHERWSKG	LATNIYKKWP	AFEKSPWVAF	DFATGLEMN	RLTPDEKUVI	DRMTKRLFR	TEGQKGVFE	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear	DLSNVVPELKTFAATS	RQNSLNECTFRR	LCEPFADLA	REFLHERWSKG	LATNIYKKWP	(AFEKSPWVAF	DFATGLKMN	RLTPDEKQVI	DRMTKRLFR	TEGOKGVPE?	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear MG682510 Naju pear	DLSNVVPELKTFAATS	RQNSLNECTFRR	LCEPFADLA	REFLHERWSRG	LATNIYKKWPI	AFEKSPWVAF	DFATGLRMN	RLTPDEKOVI	DRMTKRLFR	TEGORGVIE	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear MG682510 Naju pear GQ330294 China pear	DLSNVVPELKTFAATS	RONSLNECTFRE	LCEPFADLA	REPLHERWSKG	LATNIYKKWPI	AFEKSPWVAF	DPATGLRMN	RLTPDEK	DRMTKRLFR	TEGORGVIE	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear MG682510 Naju pear GQ330294 China pear KR606324 Korea apple	DLSNVVPELKTFAATS	RONSLNECTFRR	LCEPFADLA	REFLHERWSKG	LATNIYKKWPI	CAPEKSPWVAF	DPATGLRMN	RLTPDEK	DRMTKRLFR	TEGQRGVPE	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear MG682510 Naju pear GQ330294 China pear KR606324 Korea apple JX885582 China apple	DLSNVVPELKTFAATS	RONSLNECTERR	LCEPFADLAI	REFLHERWSKG	LATNIYKKWP	CAPEKSPWVAF	DFATGLRMN	RLTPDEK	DRMTKRLFR	TEGORGVPE	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear GQ330294 China pear KR606324 Korea apple JX885582 China apple	DLSNVVPELKTFAATS	RONSLNECTERR	LCEPFADLAI	P.	LATNIYKKWP	CAPEKSPWVAP	DEATGLEMN	RLTPDEK	DRMTKRLFR	TEGORGVPE	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear MG682510 Naju pear GO330294 China pear KR606324 Korea apple JX885582 China apple LC086300 Korea pear	DLSNVVPELKTPAATS	RONSLNECTERR	LCEPFADLAI	REPLHERWSKG	LATNIYKKWPI	CAPEKSPWVAP	DFATGLIKMN	RLTPDEKUVI	DRMTKRLFR	TEGUKGVFE?	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear GO330294 China pear KR606324 Korea apple JX885582 China apple KR815877 India apple LC086300 Korea pear KF735124 China apple	DLSNWPELKTPAATS	RONSLNECTFRR	LCEPPADLAI	REFLIERWSRC.P.	LATNIYKKWPI	CAFERSPWVAP	DFATGLIKMN	RLTPDEKUVI	DRMTKRLFR	(TEGORGVPE)	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear GO330294 China pear KR606324 Korea apple JX885582 China apple KR815877 India apple LC086300 Korea pear KF735124 China apple LN90143 India apple	DLSNVVPELKTFAATS	RINSLNECTERR	LCEPPADLAI	REFLHERWSRC	LATNI YKKOPI	CAPEKSPWAP	DFATGLRMN	RLTPDEKUVI	DRMTKRLFR	(TEOOKGVPE)	GSËSNLËLEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear G0330294 China pear KR606324 Korea apple JX885582 China apple LC086300 Korea pear KR735124 China apple LN90143 India apple LN90143 India apple JN792491 Korea pear	DLSNVVPELKTPAATS	RONSLNECTFRR	LCEPPADLAI	REFLEERWSRC P	LATNI YKKOPI	CAPERSPWAR	DEATGLRMN	RLTPDEKOVI	DRMTKRLFR	(TEOOKGVPE)	GSËSNLËLËG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear MG682510 Naju pear GQ330294 China pear KR606324 Korea apple JX885582 China apple LC086300 Korea pear KR735124 China apple LN90143 India apple JN792491 Korea pear KX668488 Brazil apple	DLSNVVPELKTPAATS	RONSLINECTERR	LCEPPADLAI	REPLHERWSKC	LATNI YKKWPI	CAPEKSPWAP	DEATGLIOMN	RLTPDEKUM	DRMTKRLFR	(TEGORGVPE)	GSESNLELEG	
MG682507 Namyangju pear MG682508 Ulsan pear MG682509 Cheonan pear G0330294 China pear KR606324 Korea apple JX885582 China apple LC086300 Korea pear KR735124 China apple LN90143 India apple LN90143 India apple JN792491 Korea pear	DLSNVVPELKTPAATS	RINSLNECTERR		REFLHERWSRC	LATNI YKKWPI	CAPEKSPWAP	DEATCLEMN	RLTPDEKUM K.	DRMTKRLFR	TEGOKGVPE	GSËSNLELEG	

**Supplementary Fig. 1.** Multiple sequence alignment of apple stem grooving virus (ASGV) coat protein coding amino acid sequence. ClustalW multiple sequence alignment was performed with Bio-edit using sequence of Korea ASGV isolates and those of the isolates occurring in other countries.