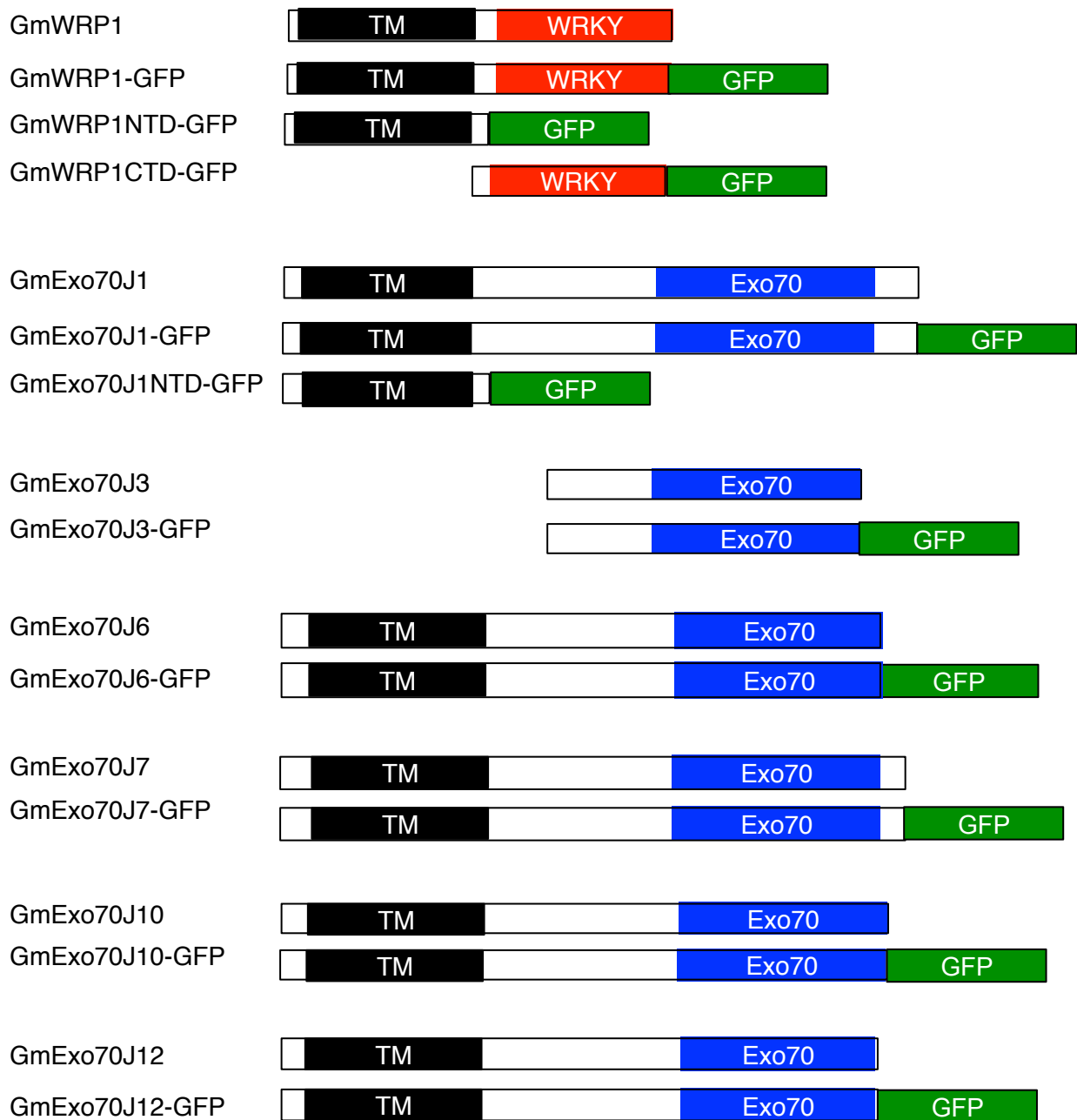
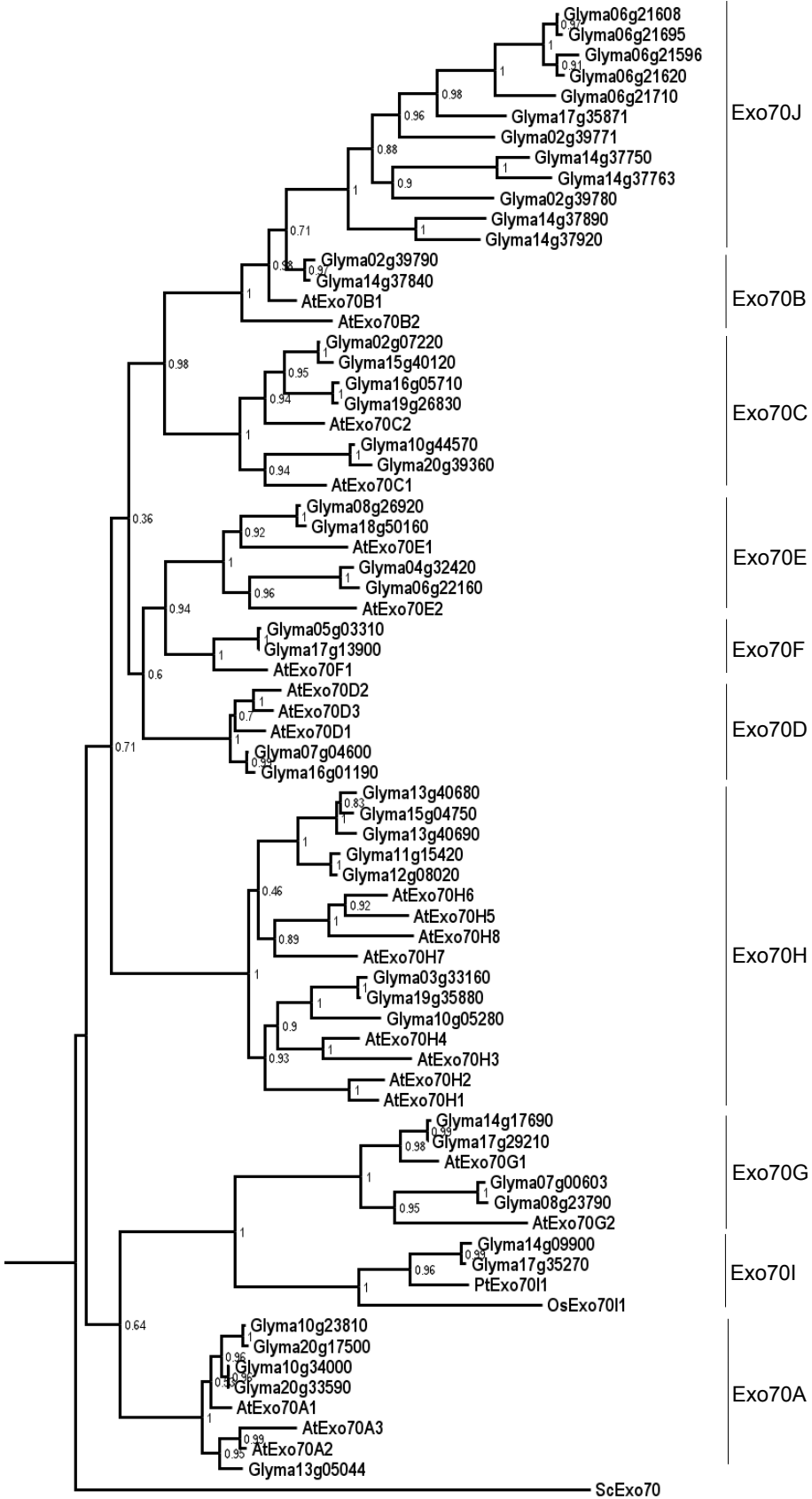


Supplemental Figure S1



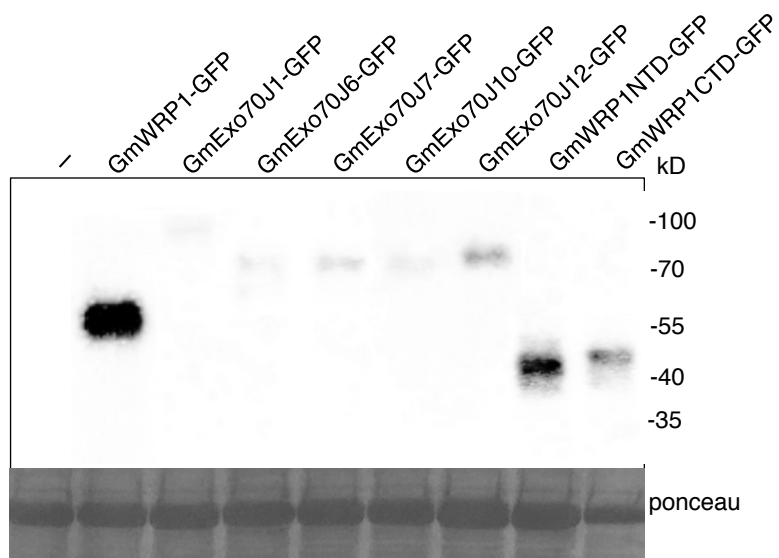
Supplemental Figure S1. Diagram of GmWRP1 and GmExo70J proteins and their GFP fusions.

Supplemental Figure S2

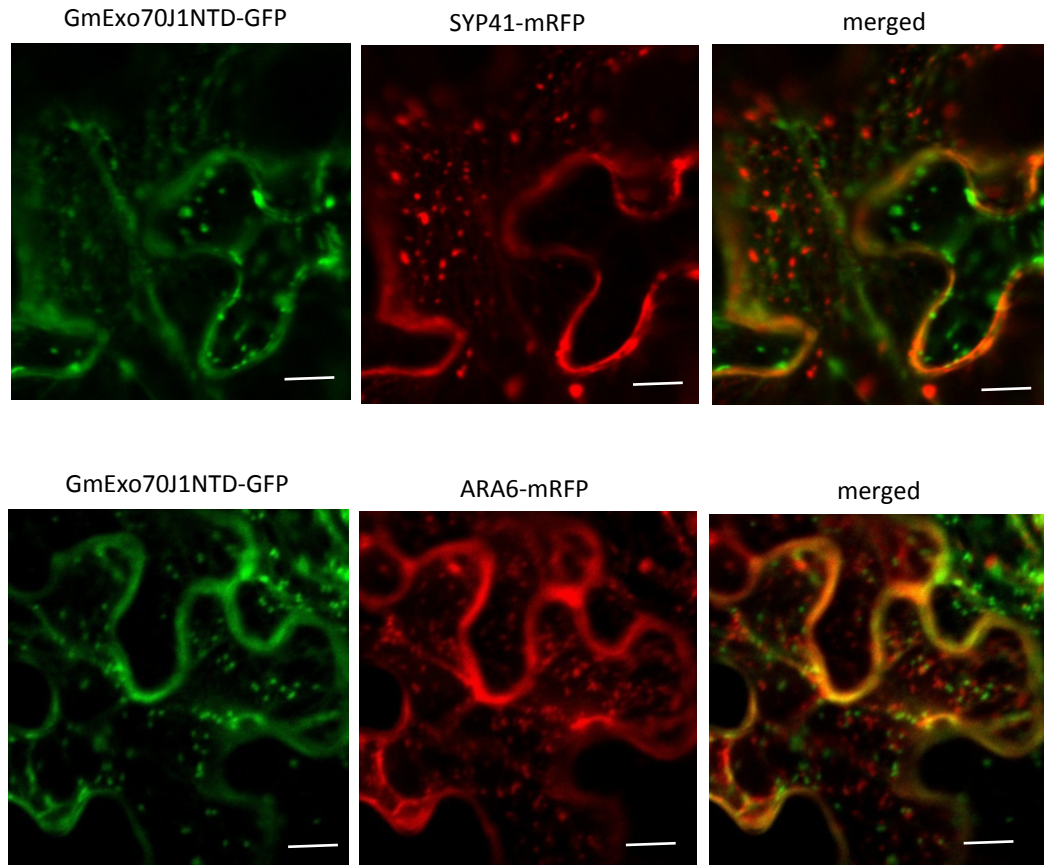


0.3

Supplemental Figure S2. Phylogenetic analysis of plant Exo70 domains. The phylogenetic tree was inferred using the maximum likelihood methods from 47 soybean GmExo70, 23 Arabidopsis AtExo70, two Exo70I protein from rice and poplar and yeast Exo70. Bootstrap values from 1,000 replicates were used to assess the robustness of the tree. Ten subclades of plant Exo70 proteins are indicated.

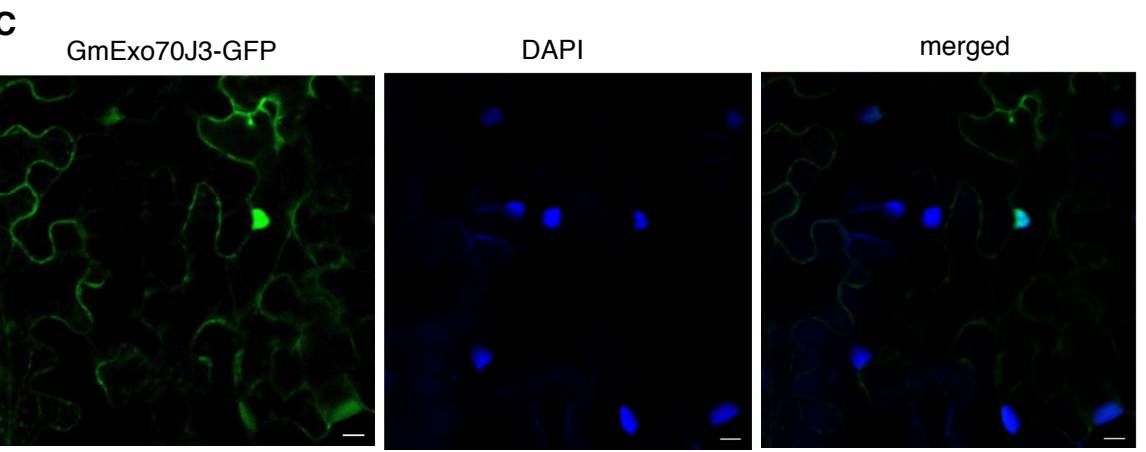
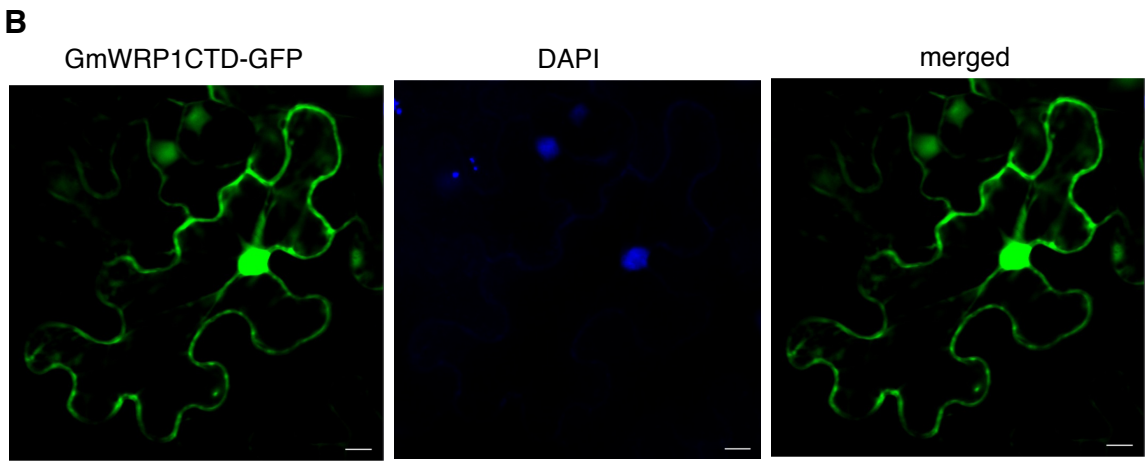
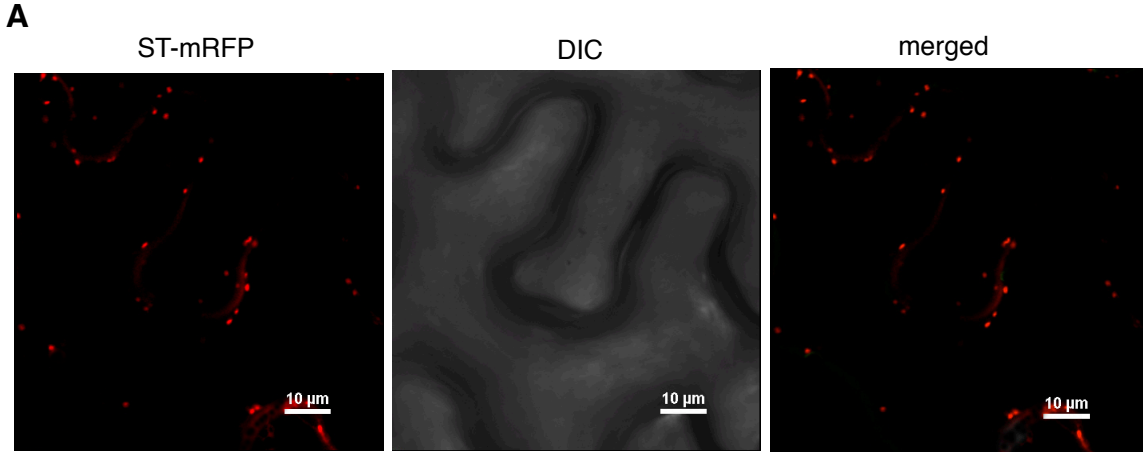


Supplemental Figure S3. Western blot analysis of GmWRP1- and GmExo70J-GFP fusion proteins expressed in tobacco leaves. Total proteins were isolated from infiltrated tobacco leaves and separated by SDS-PAGE. The GFP fusion proteins were detected with an anti-GFP antibody. Ponceau staining of the blot was also shown as loading control.



Supplemental Figure S5. Lack of colocalization of GmExo70J1NTD with TGN marker Syp41 or MVB marker ARA6.

The GmExo70J1NTD-GFP fusion gene was coexpressed with the TGN marker Syp41-mCherry or the MVB marker gene ARA6-mCherry in *N. benthamiana*. Few GmExo70J1NTD-GFP fluorescence signals were labeled by punctate Syp41- or ARA6-mCherry signals. Bar=10 μ m.



Supplemental Figure S6. Subcellular localization of ST-mRFP, GmWRP1CTD- and GmExo70J3-GFP.

A. The red fluorescent signal, DIC and merged images of tobacco cells expressing the ST-mRFP Golgi marker alone.

B. The GFP signals, DAPI staining and merged images of tobacco cells expressing the GmWRP1CTD- GFP fusion gene.

C. The GFP signals, DAPI staining and merged images of tobacco cells expressing the GmExo70J3-GFP fusion gene.

Bar=10 μm .

Supplemental Table S1. Primers for generating GFP fusion constructs

Name	Gene identifier	Primers
GmWRP1	Glyma14g37960	F: AGCCTCGAGATGCCTTTCCGAAATTCCAATAT R: AGCGGATCCTATTTTCATTTGGATATTGAGGAGTTC
GmWRP1NTD	Glyma14g37960	F: AGCCTCGAGATGCCTTTCCGAAATTCCAA R: AGCGGATCCGTCATCAAACCTCTTTTTTCCATCT
GmWRP1CTD	Glyma14g37960	F: AGCCTCGAGATGTTTTTTCGTTCCAAGTTGG R: AGCGGATCCTATTTTCATTTGGATATTGAGGAGTTC
GmExo70J1	Glyma02g39771	F: AGCGTTCGACATGCTCATTGAGATTTCAG R: AGCCCCGGGTCCCTTACAAGAAA
GmExo70J1NTD	Glyma02g39771	F: AGCCTCGAGATGCTCATTGAGATTTCAGAGTTG R: AGCGGATCCACTGCTATTGATTTCTGATGAAAGTG
GmExo70J3	Glyma06g21596	F: AGCCTCGAG ATGGGTTGCATAGAGG R: AGCGGATCC CTCTCTTACAAGAAAC
GmExo70J6	Glyma06g21695	F: AGCCTCGAGATGGTCTTCATGTTGATCATGATC R: AGCGGATCCCTCTCTTACAAGAAACAAATTGTTGA
GmExo70J7	Glyma06g21710	F: AGCCTCGAGATGGTCTTCATGTTGATCATGATCA R: AGCGGATCCCATTCTTACAAGAAACAAATTATTGAG
GmExo70J9	Glyma14g37763	F: AGCCTCGAGATGGCGGCTCTCTTTGTTG R: AGCAGATCTTTTGATCCTTGAGGCCTGTG
GmExo70J12	Glyma17g35871	F: AGCCTCGAGATGCTCATAATAAGATTCCGAGT R: AGCCCATGGCCTCTAGTTCTTTCTCCCATACAAGA

Supplemental Table S2. Primers for qRT-PCT

Name	Gene identifier	Primers
GmWRP1	Glyma14g37960	F: ACAAATGCACACAACCCACT R: AGGTGACAGGCTCTGAAGGT
GmExo70J1	Glyma02g39771	F: AGCCAGAATAGCAAGGCTGT R: TAGCCAATAGGTCCCAATCC
GmExo70J4	Glyma06g21608	F: GTCCTTGCCAGACTCCAGTG R: TCCTCCTTTAACCCCTGCTGT
GmExo70J6	Glyma06g21695	F: GTCCTTGCCAGACTCCAGTG R: TCCTCCTTTAACCCCTGCTGT
GmExo70J7	Glyma06g21710	F: TCCTTCAATGAACACCTGGA R: CTGCAATCTCGCAATGAAGT
GmExo70J9	Glyma14g37763	F: GTGGAGGGCTTCATCTGATT R: AGTCGTCTCTGGACTTGGCT
GmExo70J10	Glyma14g37890	F: GTGAGCGACGACTCTGTGATA R: AAATGTCCCTGCTTGCTTCT
GmExo70J12	Glyma17g35871	F: TCCCTCTTGAATTCCCAGTC R: TGGTCCTCGTTGACAACATT

Supplemental Table S3. Primers for BPMV silencing constructs

Name	Gene identifier	Primers
GmWRP1	Glyma14g37960	F: AAGGGATCCTCTATTGTTGCAGCCATATTTTG R: TTGGGTACCCTCTTCACATAGCAAGTGGGTTG
GmExo70J1	Glyma02g39771	F: AAGGGATCCTCGATAAAAGCTTTGAAT R: TTGGGTACCCTTGCACAGAAGGTGAAAG
GmExo70J4	Glyma06g21608	F: AAGGGATCCATAGCCATGATAACAAACCTG R: TTGGGTACCCTCTTACAAGAAATAAATTGT
GmExo70J6	Glyma06g21695	F: AAGGGATCCTTCGGGGAATTGTTAAGT R: TTGGGTACCCCATGAGCTTCTCAGAT
GmExo70J7	Glyma06g21710	F: AAGGGATCCAGAAACAGAACCAGTCCT R: TTGGGTACCCCATGTTGAGCTCTTCCAAT
GmExo70J9	Glyma14g37763	F: AAGGGATCCAAGGGATTGACGATTCGT R: TTGGGTACCCTTCCAAAATGCTCTCTAG
GmExo70J10	Glyma14g37890	F: AAGGGATCCCAATTGCTGAATATTGCT R: TTGGGTACCCAGATGTTCCAGCTCCA
GmExo70J12	Glyma17g35871	F: AAGGGATCCGACATTTTGAAGGTGGACAT R: TTGGGTACCCTCCCATAACAAGAAACAAAT