

**Table S1. Primers used for molecular cloning, screening for homozygous transgenic plants, and reverse-transcriptase PCR.**

Primer pair	Used for	Primer sequences
1	cloning of full length <i>MMP1</i> cDNA	For 5'-ATGGATGAATTTGAATCTAC-3' Rev 5'-TTAACAGAAAACCGATAG-3'
2	screening of homozygous transgenic plants by partial amplification of the <i>AAP1</i> promoter and the <i>MMP1</i> gene	For 5'-TCCCTCCATATGTGGTCTCTGTC-3' Rev 5'-GGTCAGGTGCTTTGATCTAGGACC-3'
3	screening of homozygous transgenic plants by amplifying the kanamycin resistance <i>NPTII</i> gene (ECU32991)	For 5'-ACCGGATCTGGATCG-3' Rev 5'-TTGGTCGGTCATTTCGAACC-3'
4	<i>MMP1</i> expression analysis of using reverse-transcriptase PCR	For 5'-CGAAGTCCTCTAACGAATGTCCGCTA-3' Rev 5'-GCTTCCCGTTTGTTATTGCCTTGAG-3'
5		For 5'-CGAAGTCCTCTAACGAATGTCCGCTA-3' Rev 5'-CGGGCAGCGAAAGGTACG-3'
6	amplification of <i>EF1<math>\alpha</math></i> (X96555) as control for reverse-transcriptase PCR	For 5' CAGTGGGACGTGTTGAAACTGGTGT-3' Rev 5'-CATGATGATGACCTGGGACGTGAAGT-3'
7	cloning of a partial pea <i>CAT6</i> cDNA	For 5'-GCSGTTTCRACBATGGCRGARGAAG-3' Rev 5'-CTACTACTYTGAACTTTGGTCCWC-3'