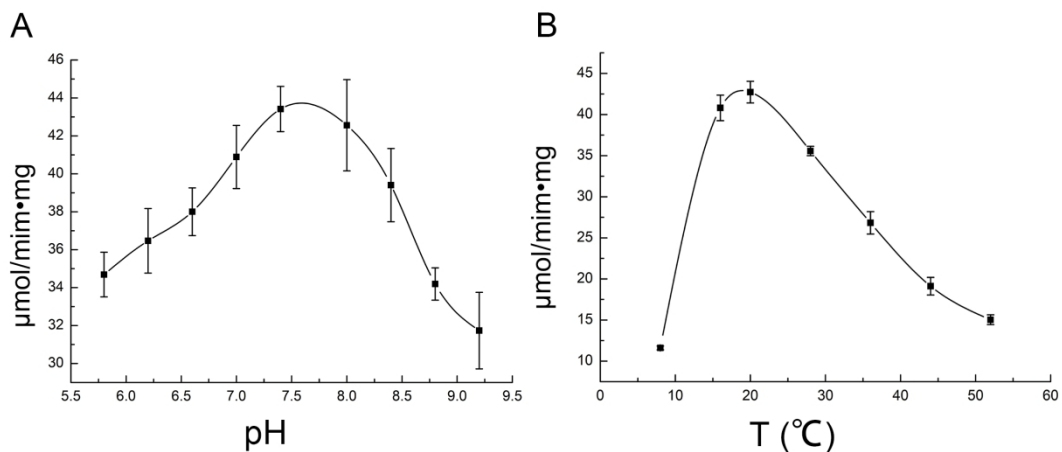


**Supplementary Figure 1. The distance between the pairs of grana membranes of wild-type and transgenic plants untreated or treated with 100  $\mu$ M MV.**

Micrographs of sections from 3 specimens were examined. Statistical differences were determined. Values are means  $\pm$  SD (n = 30). Significant differences between mean values are indicated by asterisks using Student's t-test. \*\* and \* indicate P < 0.01 and P < 0.05, respectively.



**Supplementary Figure 2. The optimal pH and temperature of PtotAPX.**

**Supplementary Table 1.** Sequences of primers used in this study.

Primers	Primer sequences (5'-3')	Restriction sites
<i>PtotAPX-F</i>	ATGGCTTCTCTCAGTGGTGGTG	N/A
<i>PtotAPX-R</i>	CTTCCAAGTTTTATATGTGATTTC	N/A
<i>P-PtotAPX-F</i>	CGGGATCCTACTCTCCTTCCTCTCTCA	<i>BamH</i> I
<i>P-PtotAPX-R</i>	CCCAAGCTTAACTTAATTTCCAAGAAGAG	<i>Hind</i> III
<i>qRT-actin-F</i>	AAACTGTAATGGTCCTCCCTCCG	N/A
<i>qRT-actin-R</i>	GCATCATCACAATCACTCTCCGA	N/A
<i>qRT-PtotAPX-F</i>	CTGGAAAGAGAGAGTTGTCAG	N/A
<i>qRT-PtotAPX-R</i>	GTGCCAGAACAGCAATCAC	N/A