Supplemental Material

Developmental and molecular physiological evidence for the role of phospho*enol*pyruvate carboxylase in rapid cotton fibre elongation

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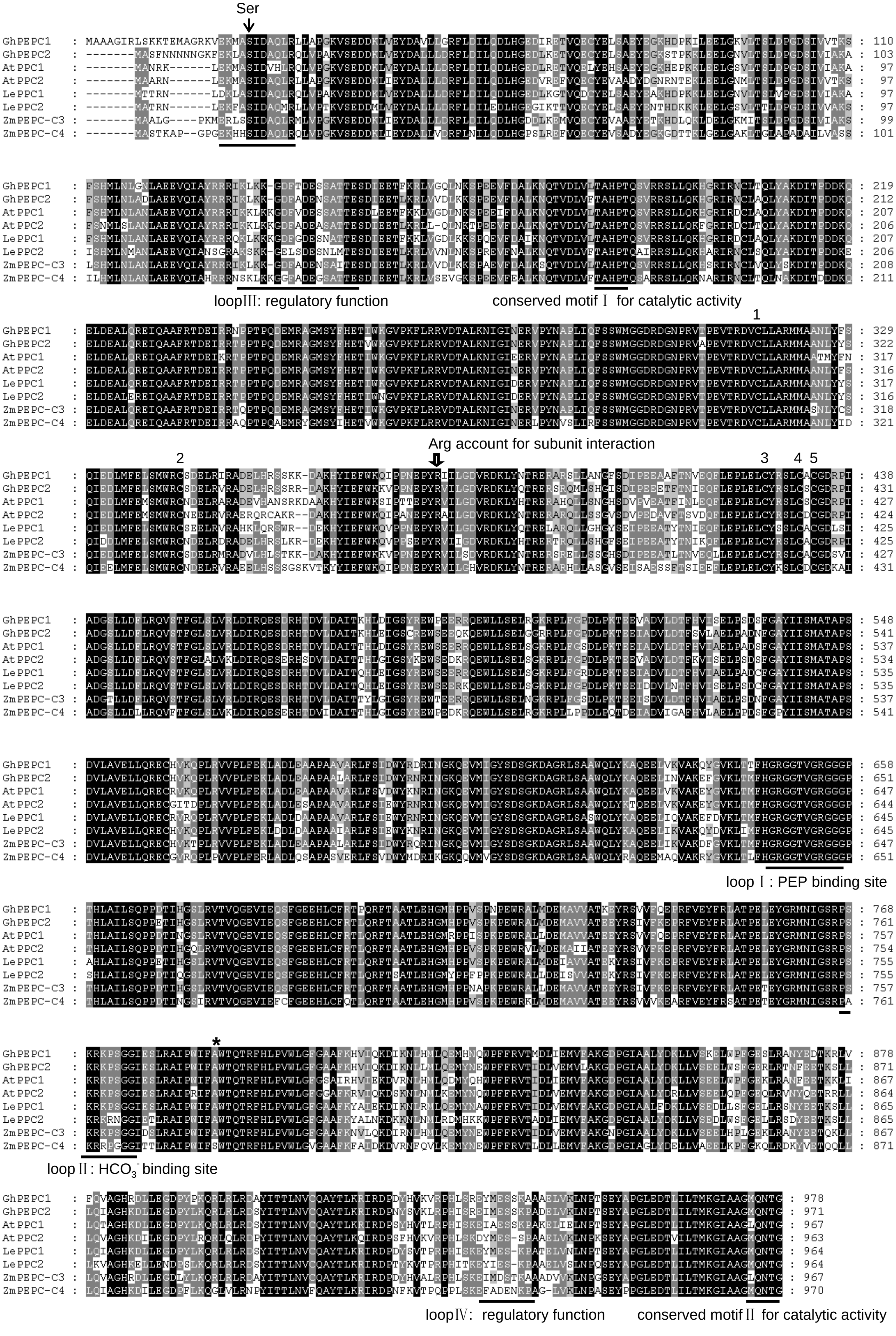
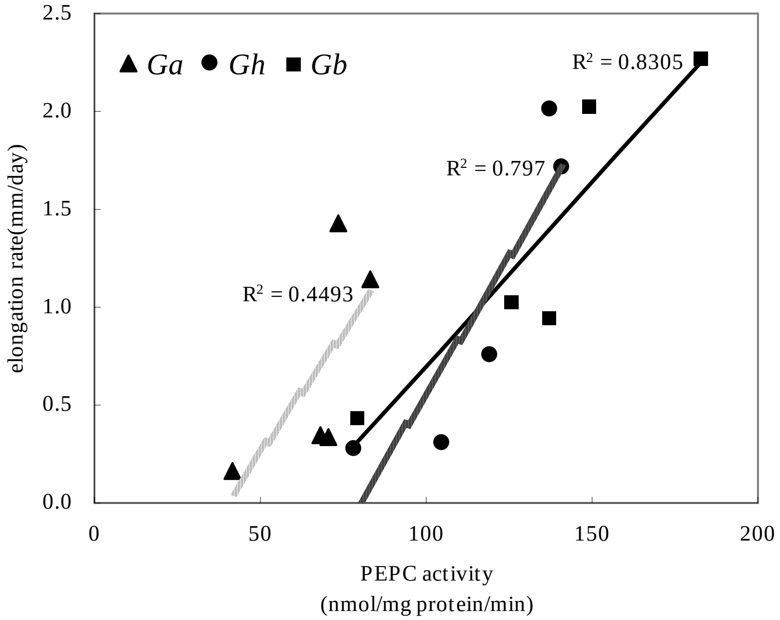

Ser
GhPEPC1
GhPEPC2
AtPPC1
AtPPC2
LePPC1
LePPC2
ZmPEPC-C3
ZmPEPC-C4
loopⅢ: regulatory function
conserved motif Ⅰ for catalytic activity
1
Arg account for subunit interaction
2
3
4
5
loop Ⅰ: PEP binding site
*
loop Ⅱ: HCO$_3^-$ binding site
loopⅣ: regulatory function
conserved motif Ⅱ for catalytic activity

Supplemental Fig. 1. Alignment of the deduced amino acid sequences of GhPEPC1 and GhPEPC2 with PEPCs from other plant species.

Putative regulatory and catalytic domains are underlined. The arrow marks the phosphorylable Ser residue at the phosphorylation domain (underlined); *, the position of the C3 signature Ala; C (1-5), plant conserved Cys residues. The accession numbers of these known proteins in Genbank are as follows: GhPEPC1 (AF008939); GhPEPC2 (EU032328); AtPPC1 (AJ532901); AtPPC2 (AJ532902); LePPC1 (AJ243416); LePPC2 (AJ243417); ZmPEPC-C3 (X61489); ZmPEPC-C4 (NM_001111948).



Supplemental Fig. 2. Correlation analyses between PEPC activity and fiber elongation rate among *Ga*, *Gh* and *Gb*, (Data re-plotted from Figs 2A and B).