



Consensus Region II

Consensus Region I

Supplemental Figure 1. Amino acid sequence alignment of recent and new subfamilies. The amino acid sequences of sHsps were aligned with wheat Hsp16.9-CI by ClustalX1.83. The predicted  $\beta$ -strands depicted by thick lines above the alignment are based on their position in known structure of wheat Hsp16.9 [van Montfort RL, Basha E, Friedrich KL, Slingsby C, Vierling E: Crystal structure and assembly of a eukaryotic small heat shock protein. Nat Struct Biol 2001, 8(12):1025-1030]. Black box in the consensus region I and  $\beta$ 10-strand depicts unconserved regions in CVI and CIX subfamilies. The accession numbers of sHsps are given in Fig. 2.