Additional file 3: Representative secondary structures of Rsx RNA predicted by Mfold

The numbers denoted at some loops indicate the number of nucleotides in each motif that are located in the single-stranded loops of Rsx RNA. Note that the motifs in the Rsx AG-12 domain, positions 4,141–4,630 and 9,821–10,620 are only redundant-AG (r-AG) motifs because of the lack of redundant-UC (r-UC) motifs in these regions (see Figure 3a). The RNA secondary structures predicted for each of these two regions in the Rsx AG-12 domain are similar, and a representative Structure 1 is presented. On the other hand, those predicted for the Rsx UC-dominant domain are varied, and three examples are presented here (Structures 1–3).

Rsx AG-12 domain [4,141−4,630] with clustered AG-12b motifs

Structure 1

AG-12b n = 13
Others   n = 1

dG = −220.41 [Initially −227.20] Rsx clustered AG12b1 4141-4630

Rsx AG-12 domain [9,821−10,620] with clustered AG-12a/12c motifs

Structure 1

AG-12a n = 12
AG-12b n = 1
AG-12c n = 6
Others   n = 7

dG = −304.44 [Initially −337.00] Rsx AG12c domain 9821-10620

Rsx UC-dominant domain [12,941−13,940]

Structure 3

r-AG n = 6
r-UC n = 9

Structure 1

Structure 2