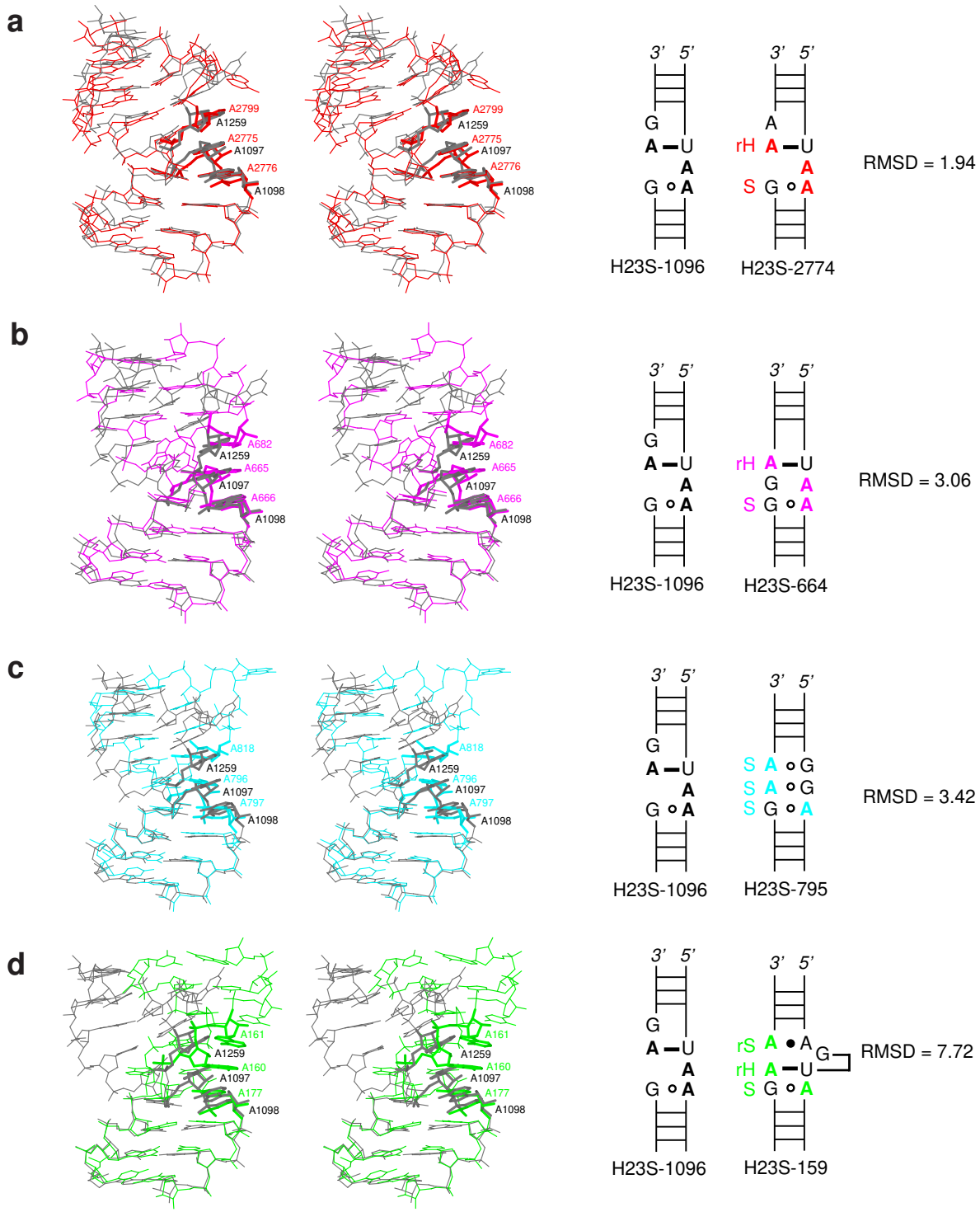

Supplementary Fig. 2 Stereo views for the pairwise superpositions of the UAA/GAN motif (gray) and other RNA motifs that form a cross-strand AAA stack: (a) UAA/GAN vs. UAA/GAN (comparison of the two loops with the smallest RMSD value), (b) UAA/GAN vs. UAA/GAN (the two loops with the largest RMSD), (c) UAA/GAN vs. GGA/GAA, (d) UAA/GAN vs. E-loop motif. To facilitate visual comparison of each pair of structures, the lower helices are superimposed. The As of the AAA stack are highlighted with thicker lines and shown with their positions (right panels), and their basepairing patterns and conformations are schematically shown (right panels): sheared (S), reversed Hoogsteen (rH), and reversed sheared (rS). All of the structure fragments are from the high-resolution structure from *H. marismortui* (Ban, N. *et al*. *Science* **289**, 905-920 (2000)).