Supplementary information

Title: Structure-based design of antisense oligonucleotides that inhibit SARS-CoV-2 replication

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Supplementary Figure 1. An example to explain why it is important to perform 3D-ASO design. **a** A 2D design in which a 21-nt ASO is fully complementary to the entire hairpin loop of a target RNA. **b** 3D model indicates that the ASO-loop duplex and the hairpin stem are incompatible because immediately neighboring residues are far apart. The impossible linkages are indicated by the curved black lines.

Supplementary Table 1. PDB codes of pseudoknot structures inspected in this study.

| PDB Codes |
|-----------|
| 2LC8, 1F27, 1L2X, 1L3D, 2G1W, 3T4B, 5KMZ, 1E95, 1KPY, 1KPZ |
| 1RNK, 1YG4, 1YMO, 2A43, 2AP5, 2K95, 2RP1, 2RP0, 2TPK, 1A60 |
| 1HVU, 1KAI, 1KPD, 1YG3, 2AP0, 2K96, 2M8K, 437D, 4ATO, 3SUH |
| 3SUX, 3SUY, 5K7C, 5K7D, 5K7E, 3FU2, 3K1V, 5TPY, 3VRS, 4EN5 |
| 4ENA, 4ENB, 4ENC, 2H0S, 2H0W, 2H0X, 2H0Z, 2N8V, 4OJI, 4RGF |
| 2GCS, 2GCV, 2HO6, 2HO7, 2L1V, 3MJ3, 3MJB, 4JF2, 2MIY, 3GX2 |
| 4OUQ, 4P5J, 4RGE, 5D5L, 6FZ0, 3GX3, 3GX5, 3GX6, 3GX7, 5KH8 |
| 5NWQ, 5NY8, 5NZ3, 5NZ6, 5NZD, 5O62, 5O69, 2QWY, 3Q50, 3Q51 |
| 4RMO, 4RZD, 4LVV, 4LVW, 4LVX, 4LVY, 4LVZ, 4LW0, 2VAZ, 4PQV |
| 1SLS, 2IL9, 5KQE |