| Name                  | Sequence (5’→3’)                                      |
|-----------------------|------------------------------------------------------|
| 15-mer capped RNA     | (m^7Gppp)GAAUGCUAUAAUAG                              |
| 14-mer capped RNA     | (m^7Gppp)GAAUGCUAUAAUAG                              |
| 14-mer 5’ vRNA        | pAGUAGUAACAGAG                                       |
| 18-mer 3’ vRNA        | UAUACCUCUGCUCUCUGCU                                  |
| 21-mer 3’ vRNA        | UAUACCUCUGCUCUGCUGCU                                  |
| 20-mer marker         | (m^7Gppp)-mO^2GAAUCACAUAAGACCAGGC                    |
| 23-mer marker         | (m^7Gppp)-mO^2GAAUCACAUAAGACCAGGC                    |
| 28-mer marker         | (m^7Gppp)-mO^2GAAUCACAUAAGACCAGGC                    |

**Supplementary Table 1**

RNA sequences used for biochemical assay, cryoEM and crystallization with influenza B polymerase.