

Supplementary Table S9. Sample' s Isolate IDs & accession nos.

| Sample's Isolate IDs & accession no. of subtype A/H3N2 uploaded on GISAID |                  |             |         |               |         |
|---------------------------------------------------------------------------|------------------|-------------|---------|---------------|---------|
| Sr No.                                                                    | Isolate ID       | Sample Name | Segment | Accession No. | Subtype |
| 1                                                                         | EPI_ISL_20238018 | 20230307-1  | PB2     | EPI4778176    | H3N2    |
|                                                                           |                  |             | PB1     | EPI4778177    |         |
|                                                                           |                  |             | PA      | EPI4778178    |         |
|                                                                           |                  |             | HA      | EPI4778179    |         |
|                                                                           |                  |             | NP      | EPI4778180    |         |
|                                                                           |                  |             | NA      | EPI4778181    |         |
|                                                                           |                  |             | MP      | EPI4778182    |         |
|                                                                           |                  |             | NS      | EPI4778183    |         |
| 2                                                                         | EPI_ISL_20238019 | 20230308-11 | PB2     | EPI4778184    |         |
|                                                                           |                  |             | PB1     | EPI4778185    |         |
|                                                                           |                  |             | PA      | EPI4778186    |         |
|                                                                           |                  |             | HA      | EPI4778187    |         |
|                                                                           |                  |             | NP      | EPI4778188    |         |
|                                                                           |                  |             | MP      | EPI4778189    |         |
|                                                                           |                  |             | NS      | EPI4778190    |         |
| 3                                                                         | EPI_ISL_20238020 | 20230308-14 | PB2     | EPI4778191    |         |
|                                                                           |                  |             | PB1     | EPI4778192    |         |
|                                                                           |                  |             | PA      | EPI4778193    |         |
|                                                                           |                  |             | NP      | EPI4778194    |         |
|                                                                           |                  |             | NA      | EPI4778195    |         |
|                                                                           |                  |             | MP      | EPI4778196    |         |
|                                                                           |                  |             | NS      | EPI4778197    |         |
| 4                                                                         | EPI_ISL_20239487 | 20230311-5  | PB2     | EPI4782453    |         |
|                                                                           |                  |             | PB1     | EPI4782454    |         |
|                                                                           |                  |             | PA      | EPI4782455    |         |
|                                                                           |                  |             | HA      | EPI4782456    |         |
|                                                                           |                  |             | NP      | EPI4782457    |         |
|                                                                           |                  |             | NA      | EPI4782458    |         |
|                                                                           |                  |             | MP      | EPI4782459    |         |
|                                                                           |                  |             | NS      | EPI4782460    |         |
| 5                                                                         | EPI_ISL_20239489 | 20230314-30 | PB2     | EPI4782461    |         |
|                                                                           |                  |             | PB1     | EPI4782462    |         |
|                                                                           |                  |             | PA      | EPI4782463    |         |
|                                                                           |                  |             | HA      | EPI4782464    |         |
|                                                                           |                  |             | NP      | EPI4782465    |         |
|                                                                           |                  |             | NA      | EPI4782466    |         |
|                                                                           |                  |             | MP      | EPI4782467    |         |
|                                                                           |                  |             | NS      | EPI4782468    |         |

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| 6  | EPI_ISL_20239497 | 20230314-33 | PB2 | EPI4782469 |
|    |                  |             | PB1 | EPI4782470 |
|    |                  |             | PA  | EPI4782471 |
|    |                  |             | NP  | EPI4782472 |
|    |                  |             | NA  | EPI4782473 |
|    |                  |             | MP  | EPI4782474 |
|    |                  |             | NS  | EPI4782475 |
| 7  | EPI_ISL_20239512 | 20230321-12 | PB2 | EPI4782476 |
|    |                  |             | PB1 | EPI4782477 |
|    |                  |             | PA  | EPI4782478 |
|    |                  |             | HA  | EPI4782479 |
|    |                  |             | NP  | EPI4782480 |
|    |                  |             | NA  | EPI4782481 |
|    |                  |             | MP  | EPI4782482 |
| 8  | EPI_ISL_20239513 | 20230326-7  | NS  | EPI4782483 |
|    |                  |             | PB2 | EPI4782484 |
|    |                  |             | PB1 | EPI4782485 |
|    |                  |             | PA  | EPI4782486 |
|    |                  |             | HA  | EPI4782487 |
|    |                  |             | NP  | EPI4782488 |
|    |                  |             | NA  | EPI4782489 |
| 9  | EPI_ISL_20239514 | 20231122-1  | MP  | EPI4782490 |
|    |                  |             | NS  | EPI4782491 |
|    |                  |             | PB2 | EPI4782521 |
|    |                  |             | PB1 | EPI4782526 |
|    |                  |             | PA  | EPI4782530 |
|    |                  |             | HA  | EPI4782532 |
|    |                  |             | NP  | EPI4782535 |
| 10 | EPI_ISL_20239515 | 20231220-1  | MP  | EPI4782539 |
|    |                  |             | PB2 | EPI4782567 |
|    |                  |             | PB1 | EPI4782575 |
|    |                  |             | PA  | EPI4782576 |
|    |                  |             | HA  | EPI4782582 |
|    |                  |             | NP  | EPI4782584 |
|    |                  |             | NA  | EPI4782588 |
| 11 | EPI_ISL_20239774 | 20231220-2  | MP  | EPI4782591 |
|    |                  |             | NS  | EPI4782594 |
|    |                  |             | PB2 | EPI4782680 |
|    |                  |             | PB1 | EPI4782681 |
|    |                  |             | PA  | EPI4782682 |
|    |                  |             | HA  | EPI4782683 |
|    |                  |             | NP  | EPI4782684 |
|    |                  |             | NA  | EPI4782685 |

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|----|------------------|------------|-----|------------|
| 12 | EPI_ISL_20239775 | 20231220-3 | MP  | EPI4782686 |
|    |                  |            | NS  | EPI4782687 |
|    |                  |            | PB2 | EPI4782688 |
|    |                  |            | PB1 | EPI4782689 |
|    |                  |            | PA  | EPI4782690 |
|    |                  |            | HA  | EPI4782691 |
|    |                  |            | NA  | EPI4782692 |
|    |                  |            | MP  | EPI4782693 |
| 13 | EPI_ISL_20239776 | 20231231-2 | NS  | EPI4782694 |
|    |                  |            | PB2 | EPI4782695 |
|    |                  |            | PB1 | EPI4782696 |
|    |                  |            | PA  | EPI4782697 |
|    |                  |            | HA  | EPI4782698 |
|    |                  |            | NP  | EPI4782699 |
|    |                  |            | NA  | EPI4782700 |
|    |                  |            | MP  | EPI4782701 |
|    |                  |            | NS  | EPI4782702 |

**Sample's Isolate IDs & accession no. of subtype A/H1N1 uploaded on GISAID**

| Sr No. | Isolate ID       | Sample Name | Segment | Accession No. | Subtype |
|--------|------------------|-------------|---------|---------------|---------|
| 1      | EPI_ISL_20239865 | 20230309-5  | PB2     | EPI4783006    | H1N1    |
|        |                  |             | PB1     | EPI4783007    |         |
|        |                  |             | PA      | EPI4783008    |         |
|        |                  |             | HA      | EPI4783009    |         |
|        |                  |             | NP      | EPI4783010    |         |
|        |                  |             | NA      | EPI4783011    |         |
|        |                  |             | MP      | EPI4783012    |         |
|        |                  |             | NS      | EPI4783013    |         |
| 2      | EPI_ISL_20239866 | 20230310-2  | PB2     | EPI4783014    |         |
|        |                  |             | PB1     | EPI4783015    |         |
|        |                  |             | PA      | EPI4783016    |         |
|        |                  |             | HA      | EPI4783017    |         |
|        |                  |             | NP      | EPI4783018    |         |
|        |                  |             | NA      | EPI4783019    |         |
|        |                  |             | MP      | EPI4783020    |         |
|        |                  |             | NS      | EPI4783021    |         |
| 3      | EPI_ISL_20239867 | 20230310-13 | PB2     | EPI4783022    |         |
|        |                  |             | PB1     | EPI4783023    |         |
|        |                  |             | PA      | EPI4783024    |         |
|        |                  |             | HA      | EPI4783025    |         |
|        |                  |             | NP      | EPI4783026    |         |

|   |                  |             |     |            |
|---|------------------|-------------|-----|------------|
| 4 | EPI_ISL_20239868 | 20230311-6  | NA  | EPI4783027 |
|   |                  |             | MP  | EPI4783028 |
|   |                  |             | NS  | EPI4783029 |
|   |                  |             | PB2 | EPI4783030 |
|   |                  |             | PB1 | EPI4783031 |
|   |                  |             | PA  | EPI4783032 |
|   |                  |             | HA  | EPI4783033 |
|   |                  |             | NP  | EPI4783034 |
|   |                  |             | NA  | EPI4783035 |
|   |                  |             | MP  | EPI4783036 |
| 5 | EPI_ISL_20239960 | 20230314-9  | NS  | EPI4783037 |
|   |                  |             | PB2 | EPI4783766 |
|   |                  |             | PA  | EPI4783767 |
|   |                  |             | HA  | EPI4783768 |
|   |                  |             | NP  | EPI4783769 |
|   |                  |             | NA  | EPI4783770 |
|   |                  |             | MP  | EPI4783771 |
|   |                  |             | NS  | EPI4783772 |
|   |                  |             | PB2 | EPI4783773 |
|   |                  |             | PA  | EPI4783774 |
| 6 | EPI_ISL_20239961 | 20230314-27 | HA  | EPI4783775 |
|   |                  |             | NP  | EPI4783776 |
|   |                  |             | NA  | EPI4783777 |
|   |                  |             | MP  | EPI4783778 |
|   |                  |             | NS  | EPI4783779 |
|   |                  |             | PB2 | EPI4783780 |
|   |                  |             | PB1 | EPI4783781 |
|   |                  |             | PA  | EPI4783782 |
|   |                  |             | NP  | EPI4783783 |
|   |                  |             | NA  | EPI4783784 |
| 7 | EPI_ISL_20239962 | 20230314-36 | MP  | EPI4783785 |
|   |                  |             | NS  | EPI4783786 |
|   |                  |             | PB2 | EPI4783787 |
|   |                  |             | PB1 | EPI4783788 |
|   |                  |             | PA  | EPI4783789 |
|   |                  |             | HA  | EPI4783790 |
|   |                  |             | NP  | EPI4783791 |
|   |                  |             | NA  | EPI4783792 |
|   |                  |             | MP  | EPI4783793 |
|   |                  |             | NS  | EPI4783794 |
| 9 | EPI_ISL_20239964 | 20230320-9  | PB2 | EPI4783795 |
|   |                  |             | PB1 | EPI4783796 |
|   |                  |             | PA  | EPI4783797 |

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|----|------------------|------------|-----|------------|
| 10 | EPI_ISL_20239960 | 20230326-4 | HA  | EPI4783798 |
|    |                  |            | NP  | EPI4783799 |
|    |                  |            | NA  | EPI4783800 |
|    |                  |            | MP  | EPI4783801 |
|    |                  |            | NS  | EPI4783802 |
|    |                  |            | PB2 | EPI4783803 |
|    |                  |            | PB1 | EPI4783804 |
|    |                  |            | PA  | EPI4783805 |
|    |                  |            | HA  | EPI4783806 |
|    |                  |            | NP  | EPI4783807 |
|    |                  |            | NA  | EPI4783808 |
|    |                  |            | MP  | EPI4783809 |
|    |                  |            | NS  | EPI4783810 |