Supplementary Table 1. HI antibody response pattern in children likely primed with SY/97-like viruses

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Serum No. | Birth year | IN/6/13 | OH/13/12 | SH/87 | BJ/92 | WH/95 | SY/97 |
| 1 | 1998 | 80 | 10 | 5 | 5 | 80 | 320 |
| 2 | 1998 | 40 | 20 | 5 | 5 | 40 | 160 |
| 3 | 1998 | 40 | 20 | 5 | 5 | 20 | 160 |
| 4 | 1998 | 40 | 57 | 5 | 5 | 20 | 320 |
| 5 | 1998 | 80 | 80 | 5 | 5 | 80 | 320 |
| 6 | 1998 | 40 | 20 | 5 | 5 | 40 | 160 |
| 7 | 1998 | 226 | 160 | 10 | 40 | 80 | 453 |
| 8 | 1998 | 160 | 160 | 5 | 20 | 160 | 640 |
| 9 | 1998 | 80 | 20 | 5 | 28 | 80 | 320 |
| 10 | 1998 | 80 | 80 | 5 | 20 | 40 | 160 |
| 11 | 1998 | 160 | 160 | 5 | 10 | 160 | 640 |
| 12 | 1997 | 40 | 40 | 5 | 5 | 20 | 160 |
| 13 | 1997 | 80 | 80 | 5 | 20 | 40 | 160 |
| 14 | 1997 | 40 | 40 | 5 | 20 | 80 | 320 |
| 15 | 1997 | 80 | 160 | 5 | 10 | 20 | 320 |
| 16 | 1997 | 160 | 160 | 5 | 40 | 80 | 320 |
| 17 | 1997 | 160 | 160 | 5 | 5 | 40 | 160 |
| 18 | 1997 | 80 | 80 | 5 | 5 | 40 | 640 |
| 19 | 1997 | 113 | 40 | 7 | 10 | 28 | 640 |
| 20 | 1997 | 40 | 20 | 5 | 5 | 10 | 80 |
| 21 | 1996 | 80 | 40 | 5 | 7 | 40 | 160 |
| 22 | 1996 | 160 | 160 | 5 | 5 | 40 | 320 |
| 23 | 1996 | 40 | 10 | 5 | 5 | 40 | 160 |
| 24 | 1996 | 80 | 10 | 5 | 5 | 40 | 160 |
| 25 | 1996 | 80 | 10 | 5 | 5 | 40 | 160 |
| 26 | 1995 | 40 | 40 | 5 | 5 | 10 | 160 |
| 27 | 1995 | 40 | 40 | 5 | 5 | 5 | 160 |
| 28 | 1995 | 160 | 20 | 5 | 5 | 80 | 320 |
| 29 | 1995 | 40 | 20 | 5 | 5 | 40 | 640 |
| 30 | 1995 | 320 | 160 | 5 | 10 | 80 | 640 |
| 31 | 1995 | 57 | 20 | 5 | 5 | 20 | 160 |
| 32 | 1994 | 40 | 5 | 5 | 5 | 10 | 80 |
| 33 | 1994 | 80 | 40 | 5 | 5 | 20 | 320 |
| 34 | 1994 | 80 | 40 | 5 | 5 | 40 | 320 |

Supplementary Table 2. HI antibody response pattern in children likely primed with WH/95-like viruses

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Serum No. | Birth year | IN/6/13 | OH/13/12 | SH/87 | BJ/92 | WH/95 | SY/97 |
| 1 | 1998 | 320 | 28 | 5 | 20 | 320 | 640 |
| 2 | 1998 | 640 | 160 | 5 | 5 | 640 | 640 |
| 3 | 1998 | 40 | 10 | 5 | 5 | 40 | 80 |
| 4 | 1998 | 80 | 20 | 5 | 40 | 160 | 320 |
| 5 | 1997 | 160 | 20 | 5 | 5 | 160 | 320 |
| 6 | 1997 | 40 | 10 | 5 | 5 | 80 | 160 |
| 7 | 1997 | 40 | 20 | 5 | 20 | 80 | 80 |
| 8 | 1997 | 80 | 10 | 5 | 5 | 80 | 160 |
| 9 | 1997 | 80 | 20 | 5 | 5 | 40 | 80 |
| 10 | 1996 | 80 | 5 | 5 | 5 | 80 | 160 |
| 11 | 1996 | 80 | 7 | 5 | 5 | 160 | 320 |
| 12 | 1996 | 80 | 20 | 5 | 5 | 80 | 160 |
| 13 | 1996 | 160 | 40 | 5 | 20 | 80 | 160 |
| 14 | 1996 | 320 | 40 | 10 | 80 | 640 | 640 |
| 15 | 1996 | 160 | 40 | 5 | 80 | 320 | 160 |
| 16 | 1996 | 269 | 57 | 5 | 5 | 80 | 160 |
| 17 | 1995 | 57 | 7 | 5 | 5 | 80 | 160 |
| 18 | 1995 | 160 | 113 | 5 | 40 | 160 | 160 |
| 19 | 1995 | 320 | 80 | 5 | 40 | 320 | 320 |
| 20 | 1995 | 80 | 20 | 5 | 20 | 80 | 80 |
| 21 | 1995 | 80 | 5 | 5 | 5 | 80 | 160 |
| 22 | 1995 | 40 | 5 | 5 | 5 | 80 | 160 |
| 23 | 1995 | 160 | 40 | 5 | 40 | 160 | 320 |
| 24 | 1995 | 160 | 5 | 5 | 80 | 320 | 320 |
| 25 | 1995 | 160 | 5 | 5 | 40 | 160 | 160 |
| 26 | 1994 | 113 | 10 | 5 | 40 | 160 | 160 |
| 27 | 1994 | 640 | 160 | 5 | 320 | 1280 | 1280 |
| 28 | 1994 | 80 | 20 | 10 | 20 | 80 | 160 |
| 29 | 1994 | 160 | 40 | 5 | 10 | 160 | 320 |
| 30 | 1994 | 1280 | 80 | 10 | 320 | 1280 | 1280 |
| 31 | 1993 | 40 | 10 | 5 | 5 | 40 | 80 |
| 32 | 1993 | 320 | 80 | 5 | 80 | 320 | 320 |
| 33 | 1993 | 320 | 80 | 5 | 40 | 320 | 320 |
| 34 | 1992 | 160 | 40 | 5 | 20 | 160 | 160 |
| 35 | 1992 | 160 | 80 | 5 | 40 | 160 | 160 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Serum No. | Birth year | IN/6/13 | OH/13/12 | SH/87 | BJ/92 | WH/95 | SY/97 |
| 1 | 1996 | 160 | 160 | 5 | 160 | 160 | 320 |
| 2 | 1996 | 320 | 160 | 5 | 80 | 160 | 320 |
| 3 | 1996 | 320 | 135 | 5 | 113 | 226 | 453 |
| 4 | 1995 | 160 | 160 | 5 | 80 | 160 | 320 |
| 5 | 1995 | 320 | 320 | 5 | 160 | 320 | 320 |
| 6 | 1995 | 640 | 320 | 5 | 80 | 160 | 320 |
| 7 | 1995 | 80 | 80 | 10 | 160 | 160 | 320 |
| 8 | 1994 | 28 | 40 | 5 | 80 | 80 | 80 |
| 9 | 1994 | 320 | 320 | 5 | 320 | 320 | 320 |
| 10 | 1994 | 452 | 452 | 20 | 320 | 320 | 640 |
| 11 | 1994 | 160 | 160 | 5 | 160 | 160 | 160 |
| 12 | 1994 | 320 | 160 | 5 | 160 | 160 | 160 |
| 13 | 1994 | 1280 | 905 | 5 | 320 | 320 | 640 |
| 14 | 1994 | 320 | 320 | 20 | 320 | 160 | 160 |
| 15 | 1994 | 160 | 160 | 5 | 160 | 160 | 160 |
| 16 | 1994 | 320 | 640 | 40 | 320 | 160 | 160 |
| 17 | 1994 | 320 | 160 | 5 | 160 | 320 | 320 |
| 18 | 1993 | 80 | 40 | 5 | 40 | 80 | 80 |
| 19 | 1993 | 80 | 80 | 5 | 40 | 80 | 80 |
| 20 | 1993 | 160 | 160 | 5 | 160 | 160 | 160 |
| 21 | 1993 | 160 | 160 | 5 | 160 | 160 | 160 |
| 22 | 1993 | 160 | 160 | 5 | 320 | 320 | 320 |
| 23 | 1993 | 320 | 320 | 10 | 320 | 320 | 320 |
| 24 | 1993 | 1280 | 1280 | 20 | 320 | 320 | 640 |
| 25 | 1993 | 320 | 160 | 5 | 160 | 320 | 320 |
| 26 | 1993 | 320 | 640 | 5 | 320 | 640 | 640 |
| 27 | 1993 | 160 | 160 | 20 | 160 | 80 | 160 |
| 28 | 1993 | 160 | 160 | 5 | 160 | 160 | 320 |
| 29 | 1993 | 320 | 640 | 5 | 320 | 320 | 640 |
| 30 | 1993 | 320 | 320 | 40 | 160 | 320 | 320 |
| 31 | 1993 | 320 | 640 | 5 | 320 | 160 | 320 |
| 32 | 1993 | 40 | 80 | 5 | 80 | 80 | 80 |
| 33 | 1993 | 640 | 640 | 80 | 320 | 320 | 640 |
| 34 | 1993 | 80 | 160 | 5 | 160 | 160 | 160 |
| 35 | 1993 | 160 | 160 | 5 | 160 | 160 | 160 |
| 36 | 1993 | 113 | 160 | 5 | 80 | 80 | 160 |
| 37 | 1992 | 80 | 80 | 5 | 80 | 80 | 80 |
| 38 | 1992 | 80 | 160 | 5 | 80 | 80 | 80 |
| 39 | 1992 | 160 | 80 | 5 | 80 | 160 | 160 |
| 40 | 1992 | 320 | 320 | 20 | 320 | 160 | 160 |
| 41 | 1992 | 320 | 320 | 20 | 320 | 320 | 320 |
| 42 | 1992 | 320 | 640 | 10 | 640 | 320 | 320 |
| 43 | 1992 | 640 | 640 | 10 | 640 | 640 | 640 |
| 44 | 1992 | 160 | 80 | 5 | 160 | 160 | 320 |
| 45 | 1992 | 160 | 320 | 5 | 160 | 160 | 160 |
| 46 | 1992 | 640 | 1280 | 5 | 640 | 320 | 640 |
| 47 | 1992 | 80 | 80 | 5 | 320 | 320 | 320 |
| 48 | 1992 | 80 | 40 | 5 | 80 | 80 | 160 |
| 49 | 1992 | 40 | 80 | 5 | 80 | 80 | 80 |

Supplementary Table 3. HI antibody response pattern in children likely primed with BJ/92-like viruses

 Supplementary Table 4. Annual influenza A(H3N2) virus surveillance data for the 1991-92 through 1998-99 season in the US\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  | Percentage of each antigenic clusters |
| Season | Prominent influenza types/subtypes† | sH3N2 circulatingstrains | sH3N2 vaccinestrains | BJ/92 ‡ | WH/95 | SY/97 |
| 1991-1992 | H3N2, H1N1 | A/Beijing/353/89 (BJ/89)-like | BJ/89 | 0 | 0 | 0 |
| 1992-1993 | B, H3N2 | BJ/92-like, BJ/89-like | BJ/89 | 100 | 0 | 0 |
| 1993-1994 | H3N2 | BJ/92-like | BJ/92 | 100 | 0 | 0 |
| 1994-1995 | H3N2, B | SD/93-like, JOH/94-like | SD/93 | 100 | 0 | 0 |
| 1995-1996 | H1N1, H3N2 | JOH/94-like, WH/95-like | JOH/94 | 71 | 29 | 0 |
| 1996-1997 | H3N2, B | WH/95-like | WH/95-like | 0 | 100 | 0 |
| 1997-1998 | H3N2 | SY/97-like, WH/95-like | WH/95-like | 0 | 14 | 86 |
| 1998-1999 | H3N2, B | SY/97-like | SY/97-like | 0 | 0 | 100 |

\* From previous publications [34] and the annual US influenza virus surveillance data.

**†** Prominent influenza type and subtype were defined as at least 20% of isolates that were typed or subtyped in that season

 [34].

**‡** BJ/92 antigenic cluster contains BJ/92-like, A/Shandong/9/93-like (SD/93-like), and A/Johannesburg/33/94-like

 (JOH/94-like) viruses [36].