**Virologica Sinica**

**Supplementary Data**

**Seroprevalence of neutralizing antibodies against adenovirus type 26 and 35 in healthy populations from Guangdong and Shandong provinces, China**

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**Supplementary data**

**Supplementary Table S1** Demographics of serum sample donors.

|  |  |
| --- | --- |
| **Groups** | **N (%)** |
| **Age (y)** |  |
| ≤ 20 | 102 (8.6) |
| 21–30 | 133 (11.2) |
| 31–40 | 200 (16.9) |
| 41–50 | 144 (12.2) |
| 51–60 | 240 (20.3) |
| 61–70 | 270 (17.5) |
| > 70 | 158 (13.3) |
| Total | 1,184 (100） |
| **Sex** |  |
| Male | 542 (45.7) |
| Female | 642 (54.3) |
| Total | 1184 (100） |

**Supplementary Table S2** Seroprevalence of HAdV26 nAb in the cohort.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Anti-HAdV26 nAb titers**  **N (%)** | | | | | **Total positive N (%)** |
|  | **< 72** | **72–200** | **200–1000** | | **> 1000** | **≥ 72** |
| **Age (y)** |  |  |  |  | |  |
| ≤ 20 | 83 (81.4) | 14 (13.7) | 5 (4.9) | 0 (0) | | 19 (18.6) |
| 21–30 | 89 (66.9) | 21 (15.8) | 12(9) | 11 (8.3) | | 44 (33.1) |
| 31–40 | 127 (63.5) | 22 (11) | 30 (15) | 21 (10.5) | | 73 (36.5) |
| 41–50 | 72 (50) | 26 (18.1) | 33 (22.9) | 13 (9) | | 72 (50) |
| 51–60 | 106 (44.2) | 43 (17.9) | 73 (30.4) | 18 (7.5) | | 134 (55.8) |
| 61–70 | 79 (38.2) | 49 (23.7) | 46 (22.2) | 33 (15.9) | | 128 (61.8) |
| > 70 | 72 (45.6) | 32 (20.3) | 35 (22.2) | 19 (12) | | 86 (54.5) |
| Total | 628 (53) | 207 (17.5) | 234 (19.8) | 115 (9.7) | | 556 (47) |
| **Sex** |  |  |  |  | |  |
| Male | 265 (48.9) | 103 (19) | 114 (21) | 60 (11.1) | | 277 (51.1) |
| Female | 363 (56.5) | 104 (16.2) | 120 (18.7) | 55 (8.6) | | 279 (43.5) |
| Total | 628 (53) | 207 (17.5) | 234 (19.8) | 115 (9.7) | | 556 (47) |
| **Region** |  |  |  |  | |  |
| Guangdong | 474 (51.3) | 160 (17.3) | 186 (20.1) | 104 (11.3) | | 450 (48.7) |
| Shandong | 154 (59.2) | 47 (18.1) | 48 (18.5) | 11 (4.2) | | 106 (40.8) |
| Total | 628 (53.0) | 207 (17.5) | 234 (19.8) | 115 (9.7) | | 556 (47.0) |

**Supplementary Table S3** Seroprevalence of HAdV35 nAb in the cohort.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Anti-HAdV35 nAb titers**  **N (%)** | | | | **Total positive N (%)** |
|  | **< 72** | **72–200** | **200–1000** | **> 1000** | **≥ 72** |
| **Age(y)** |  |  |  |  |  |
| ≤ 20 | 93 (91.2) | 6 (5.9) | 2 (2) | 1 (1) | 9 (8.9) |
| 21**–**30 | 114 (85.7) | 5 (3.8) | 9 (6.8) | 5 (3.8) | 19 (14.4) |
| 31**–**40 | 172 (86) | 12 (6) | 11 (5.5) | 5 (2.5) | 28 (14) |
| 41**–**50 | 115 (79.9) | 13 (9) | 8 (5.6) | 8 (5.6) | 29 (20.2) |
| 51**–**60 | 200 (83.3) | 16 (6.7) | 12 (5) | 12 (5) | 40 (16.7) |
| 61**–**70 | 173 (83.6) | 11 (5.3) | 12 (5.8) | 11 (5.3) | 34 (16.4) |
| > 70 | 130 (82.3) | 13 (8.2) | 8 (5.1) | 7 (4.4) | 28 (17.7) |
| Total | 997 (84.2) | 76 (6.4) | 62 (5.2) | 49 (4.1) | 187 (15.7) |
| **Sex** |  |  |  |  |  |
| Male | 455 (83.9) | 32 (5.9) | 32 (5.9) | 23 (4.2) | 87 (16) |
| Female | 542 (84.4) | 44 (6.9) | 30 (4.7) | 26 (4) | 100 (15.6) |
| Total | 997 (84.2) | 76 (6.4) | 62 (5.2) | 49 (4.1) | 187 (15.7) |
| **Region** |  |  |  |  |  |
| Guangdong | 759 (82.1) | 68 (7.4) | 55 (6.0) | 42 (4.5) | 165 (17.8) |
| Shandong | 238 (91.5) | 8 (3.1) | 7 (2.7) | 7 (2.7) | 22 (8.5) |
| Total | 997 (84.2) | 76 (6.4) | 62 (5.2) | 49 (4.1) | 187 (15.7) |

**Supplementary Table S4 Correlation of HAdV26 and HAdV35 nAb seropositive rates.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **HAdV26 seropositive** | **HAdV26 seronegative** | **HAdV26 positive rate (%)** |
| **HAdV35 seropositive** | 97 | 90 | 51.9 |
| **HAdV35 seronegative** | 459 | 538 | 46.0 |
| **HAdV35 positive rate (%)** | 17.4 | 14.3 |  |

**Supplementary Table S5** Summary of seroprevalence of HAdV35 in published literatures.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Country** | **Positive (%)** | **Samples characteristics** | **Sample size, n** | **Year** | **Technic** | **Threshold** | **Reference** |
| America | 22.00 | Healthy adults (> 50 years old) | 103 | 2018 | A549/Ad-Luc | EC90/Serum titer > 16 | Duffy et al., 2018 |
| America | 3.00 | Healthy adults | 59 | 2005 | A549/Ad-Luc | EC90/Serum titer > 16 | Sumida et al., 2005 |
| Haïti | 22.00 | Healthy adults | 67 | 2005 | A549/Ad-Luc | EC90/Serum titer > 16 | Sumida et al., 2005 |
| Belgium | 1.00 | Healthy adults | 100 | 2003 | PER.C6/CPE | EC90/Serum dilution > 1:4 | Vogels et al., 2003 |
| Germany | 18.00 | Healthy adults (1993**–**1999 collected) | 667 | 2005 | IB essay on Fiber and pIX | Serum titer > 100 | Bauer et al., 2005 |
| Netherlands | 7.00 | Adults HIV+ | 110 | 2004 | A549/Ad-Luc | EC90/Serum titer > 16 | Kostensea et al., 2004 |
| France | 0.00 | Healthy adults | 35 | 2018 | 911/GFP (FACS) | EC50/Serum titer > 20 | Mennechet at al.2018 |
| Sub Saharan | 17.00 | Healthy adults (19 Sub Saharan countries) | 200 | 2007 | A549/Ad-Luc | EC90/Serum titer > 16 | Abbink et al., 2007 |
| South Africa | 14.20 | Healthy adults (High risk HIV) | 1551 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| Kenya | 14.80 | Healthy adults (High risk HIV) | 263 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| Uganda | 5.40 | Healthy adults | 242 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| Africa (multiple countries) | 21.70 | Healthy adults | 199 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| South Africa | 8.40 | Healthy children (6 month**–**18 years old) | 633 | 2006 | A549/Ad-Luc | EC90/Serum titer > 18 | Thorner et al., 2006 |
| Botswana | 21.00 | Healthy adults | 57 | 2005 | A549/Ad-Luc | EC90/Serum titer > 16 | Sumida et al., 2005 |
| Zambia | 20.00 | Healthy adults | 29 | 2005 | A549/Ad-Luc | EC90/Serum titer > 16 | Sumida et al., 2005 |
| Africa (Kenya, Uganda, Zambia) | 14.20 | Healthy adults | 350 | 2015 | A549/Ad-Luc | EC90/Serum titer > 16 | Omosa-Manyonyi et al., 2015 |
| South Africa | 17.00 | Healthy adults (Soweto) | 53 | 2004 | A549/Ad-GFP (FACS) | EC50/Serum titer > 8 | Nwanegbo et al., 2004 |
| Gambia | 2.70 | Healthy adults (Banjul) | 50 | 2004 | A549/Ad-GFP (FACS) | EC50/Serum titer > 8 | Nwanegbo et al., 2004 |
| Burkina Faso | 13.00 | Healthy adults (Ouagadougou) | 65 | 2018 | 911/GFP (FACS) | EC50/Serum titer > 20 | Mennechet at al., unpubished |
| Chad | 11.00 | Healthy adults (N'Djamena) | 50 | 2018 | 911/GFP (FACS) | EC50/Serum titer > 20 | Nwanegbo et al., 2004 |
| Japan | 3.00 | Healthy adults | 100 | 2003 | PER.C6/CPE | EC90/Serum dilution > 1:4 | Vogels et al., 2003 |
| Thailand | 17.10 | Healthy adults (High risk HIV) | 438 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| Japan | 2.00 | Healthy adults | 50 | 2003 | PER.C6/CPE | EC90/Serum titer > 8 | Reddy et al., 2003 |

**Supplementary Table S6** Summary of seroprevalence of HAdV26 in published literatures.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Country** | **Positive (%)** | **Samples characteristics** | **Sample size, n** | **Year** | **Technic** | **Threshold** | **Reference** |
| USA | 11.7 | Healthy adults (2000**–**2003 collected) | 94 | 2010 | HEK 293T/Ad-SEAP | EC50/Serum titer > 18 | Mast et al., 2010 |
| USA | 15.0 | Healthy adults (High Risk HIV) | 727 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| Belgium | 7.0 | Healthy adults | 100 | 2003 | PER.C6/CPE | EC90/Serum dilution > 1:4 | Vogels et al., 2003 |
| France | 2.8 | Healthy adults | 35 | 2018 | 911/GFP (FACS) | EC50/Serum titer > 20 | Mennechet at al. |
| Botswana | 77.1 | Healthy adults (2000**–**2003 collected) | 204 | 2010 | HEK 293T/Ad-SEAP | EC50/Serum titer > 18 | Mast et al., 2010 |
| Cameroon | 88.0 | Healthy adults (2000**–**2003 collected) | 301 | 2010 | HEK 293T/Ad-SEAP | EC50/Serum titer > 18 | Mast et al., 2010 |
| Malawi | 77.1 | Healthy adults (2000**–**2003 collected) | 49 | 2010 | HEK 293T/Ad-SEAP | EC50/Serum titer > 18 | Mast et al., 2010 |
| South Africa | 64.6 | Healthy adults (2000**–**2003 collected) | 236 | 2010 | HEK 293T/Ad-SEAP | EC50/Serum titer > 18 | Mast et al., 2010 |
| Sub Saharan | 21.0 | Healthy adults (19 Sub Saharan countries) | 200 | 2007 | A549/Ad-Luc | EC90/Serum titer > 16 | Abbink et al., 2007 |
| South Africa | 48.2 | Healthy adults (High risk HIV) | 1551 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| South Africa | 26.5 | Healthy children (6**–**12 years old) | 185 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| South Africa | 0.7 | Healthy infants (3**–**9 months old) | 149 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| Kenya | 66.2 | Healthy adults (High risk HIV) | 263 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| Uganda | 67.8 | Healthy adults | 242 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| Africa (multiple countries) | 42.7 | Healthy adults | 199 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |
| South Africa | 22.2 | Healthy children (6 month**–**18 years old) | 633 | 2006 | A549/Ad-Luc | EC90/Serum titer > 18 | Thorner et al., 2006 |
| Thailand | 61.2 | Healthy adults (2000**–**2003 collected) | 300 | 2010 | HEK 293T/Ad-SEAP | EC50/Serum titer > 18 | Mast et al., 2010 |
| China | 35.3 | Healthy adults (Nationwide) | 1154 | 2013 | HEK 293T/Ad-GFP | EC50/Serum > 20 | Zhang et al., 2013 |
| Thailand | 54.6 | Healthy adults (High risk HIV) | 438 | 2011 | A549/Ad-Luc | EC90/Serum titer > 18 | Barouch et al., 2011 |