

## Influenza B Yamagata lineage egg-derived<sup>1</sup> candidate vaccine viruses for development and production of vaccines for use in the 2018-2019 northern hemisphere influenza season

Antigenic and genetic analyses are performed by the WHO Collaborating Centres of the Global Influenza Surveillance and Response System (GISRS). Unless otherwise indicated all candidate vaccine viruses posted on this table have passed two-way haemagglutination inhibition (HI) test.

[National or Regional control authorities approve the composition and formulation of vaccines used in each country](#)

**22 February 2018**

### Candidate vaccine viruses

| Parent virus                 | Candidate vaccine virus | Type of virus or reassortant | Developing institute | Available from                     |
|------------------------------|-------------------------|------------------------------|----------------------|------------------------------------|
| <b>B/Phuket/3073/2013</b>    | Wild type virus         |                              |                      | WHO CCs<br>WHO ERLs                |
|                              | <b>BVR-1B</b>           | Classical                    | Seqirus              | VIDRL, Australia                   |
| <b>B/California/12/2015</b>  | <b>NYMC BX-59A</b>      | Classical                    | NYMC                 | NYMC, USA<br>CDC, USA<br>NIBSC, UK |
|                              | <b>NYMC BX-59B</b>      | Classical                    | NYMC                 | NYMC, USA<br>CDC, USA<br>NIBSC, UK |
|                              | Wild type virus         |                              |                      | CDC, USA                           |
| <b>B/Brisbane/9/2014</b>     | Wild type virus         |                              |                      | WHO CCs<br>WHO ERLs                |
| <b>B/Utah/09/2014</b>        | Wild type virus         |                              |                      | CDC, USA<br>NIBSC, UK              |
| <b>B/Hong Kong/432/2013</b>  | Wild type virus         |                              |                      | NYMC, USA<br>CDC, USA              |
| <b>B/Arizona/10/2015</b>     | Wild type virus         |                              |                      | CDC, USA<br>NIBSC, UK              |
|                              | <b>NYMC BX-63A</b>      | Classical                    | NYMC, USA            | NYMC, USA<br>NIBSC, UK             |
| <b>B/Hong Kong/3417/2013</b> | Wild type virus         |                              |                      | NYMC, USA<br>CDC, USA              |
|                              | <b>NYMC BX-57</b>       | Classical                    | NYMC                 |                                    |

<sup>1</sup> For cell culture-derived candidate vaccine viruses and reference reagents please see [http://www.who.int/influenza/vaccines/virus/candidates\\_reagents/summary\\_b\\_yam\\_cvv-cell\\_nh1819.pdf](http://www.who.int/influenza/vaccines/virus/candidates_reagents/summary_b_yam_cvv-cell_nh1819.pdf)

**Institutes contact details for candidate vaccine virus orders/information:**

**CDC:** [xxu@cdc.gov](mailto:xxu@cdc.gov)

**NIBSC:** [standards@nibsc.org](mailto:standards@nibsc.org) or [enquiries@nibsc.org](mailto:enquiries@nibsc.org)

**NYMC:** [doris\\_bucher@nymc.edu](mailto:doris_bucher@nymc.edu)

**VIDRL:** [whoflu@influenzacentre.org](mailto:whoflu@influenzacentre.org)

**WHO CCs and ERLs:** [http://www.who.int/influenza/gisrs\\_laboratory/collaborating\\_centres](http://www.who.int/influenza/gisrs_laboratory/collaborating_centres)

**Reference antigens (freeze-dried)**

| Parent virus       | Starting materials      |             | Ref Ag Lot number | Unitage (µgHA/ml) | Available from |
|--------------------|-------------------------|-------------|-------------------|-------------------|----------------|
|                    | Candidate vaccine virus | Egg or cell |                   |                   |                |
| B/Phuket/3073/2013 | Wild type               | Egg         | 16/158            | 60                | NIBSC, UK      |
|                    |                         |             | 2017/115B         | 85                | TGA, Australia |
|                    |                         |             | 2015BYA           | 62                | NIID, Japan    |
|                    |                         |             | 2015BYB           | 61                |                |
|                    |                         |             | 2017BYA           | 52                |                |
|                    |                         |             | 2017BYB           | 68                |                |
| B/Brisbane/9/2014  | Wild type               | Egg         | 14/274            | 42                | NIBSC, UK      |
| B/Utah/9/2014      | Wild type               | Cell        | 15/100            | 40                | NIBSC, UK      |

**Sheep antisera**

| Purified HA from            |             | Order Lot number   | Available from |
|-----------------------------|-------------|--------------------|----------------|
| Parent virus                | Egg or Cell |                    |                |
| B/Phuket/3073/2013          | Egg         | 15/150             | NIBSC, UK      |
|                             |             | 2015BY-1, 2017BY-1 | NIID, Japan    |
| B/Wisconsin/1/2010 (BX-41A) | Egg         | AS402/AS402-1      | TGA, Australia |
|                             |             | AS409#             |                |

# Used to calibrate B/Phuket/3073/2014 lots 2015/105B, 2017/115B.

**ERLs contact details for reagents orders/information:**

**NIBSC:** [standards@nibsc.org](mailto:standards@nibsc.org) or [enquiries@nibsc.org](mailto:enquiries@nibsc.org)

**NIID:** [flu-vaccine@nih.go.jp](mailto:flu-vaccine@nih.go.jp)

**TGA:** [influenza.reagents@health.gov.au](mailto:influenza.reagents@health.gov.au)

For other candidate vaccine viruses and potency testing reagents, please go to [http://www.who.int/influenza/vaccines/virus/candidates\\_reagents/home/en/](http://www.who.int/influenza/vaccines/virus/candidates_reagents/home/en/)

For general enquiries, please contact [gisrs-whohq@who.int](mailto:gisrs-whohq@who.int)