

# Human Virus Antigens and Antisera

## Influenza Virus

We know you need expert support that can manufacture, process and validate reagents to give you access to clean, specific, high-potency preparations. Charles River Avian Vaccine Services offers human influenza type A and B viruses supplied as allantoic fluid, concentrates and gradient-purified. We can also provide outsourcing of virus preparations with customer-supplied Biosafety Level 1 and 2 viruses to researchers in a variety of disciplines. Viruses are grown in specific pathogen-free (SPF) embryonated eggs and they can be produced in large or small quantities to meet your needs. The final preparations can be delivered in crude (bulk fluids), concentrated, fractioned or purified forms, depending upon your specific requirements.

## Influenza Types

- Influenza A/PR/8/34 (H1N1)
- Influenza A X-31, A/Aichi/68 (H3N2)
- Influenza A/Victoria/3/75 (H3N2)
- Influenza A/Hong Kong/8/68 (H3N2)
- Influenza B/Lee/40
- Customer Supplied Virus

## Sendai Virus

The original virus was obtained from American Type Culture Collection (ATCC), product code VR-907, identified as Parainfluenza 1, Sendai/Cantell strain. It was passaged several times by inoculating the virus into the Chorioallantoic Sac of 9- to 11-day-old embryonated SPF chicken eggs. Virus is supplied as sterile, clarified Allantoic fluid at a minimum titer of 2000 HA units/ml, or purified to 2 mg/ml.

## Antiserum Production

Antiserum was produced in SPF chickens. The chickens were removed from an existing SPF flock and brought to the laboratory animal facility where they were housed in a single room under strict biosecurity and HEPA-filtered air under positive pressure. Heat inactivated liquid and lyophilized avian antisera for Influenza A/PR/8/34 and Sendai (Cantell Strain) are available in 1 ml, 5 ml, 10 ml, 50 ml, and 100 ml vials.

## Benefits

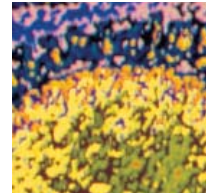
- SPF eggs and birds utilized to guarantee specificity
- Egg handling expertise to maximize reactivity
- Ready-to-use, tested preparations to ensure convenience and confidence in a clean, efficacious product

## To order, contact:

Charles River  
Avian Vaccine Services  
106 Route 32  
North Franklin, CT 06254

Tel: +1 (860) 889-1389  
Fax: +1 (860) 889-1991

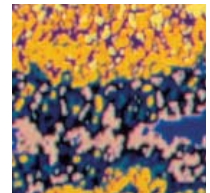
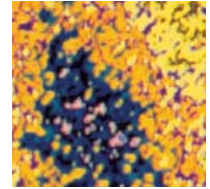
Toll free: +1 (800) 772-3271  
Email: [csdspf@crl.com](mailto:csdspf@crl.com)



## Sucrose Gradient Purification of Human Influenza Viruses

SPF chicken embryos are inoculated with BSL-2 virus stock provided by Charles River or with virus supplied by the customer. After incubating, candling to remove dead embryos and chilling, the infectious allantoic fluid (AF) is harvested from each egg. The allantoic fluid in each harvest container is then tested for sterility.

The AF is then concentrated via tangential flow filtration (TFF), and the virus is pelleted via centrifugation. The pellet is resuspended in a Hepes-buffered saline and is placed on a sucrose step gradient and centrifuged. The interface band is removed and washed in buffer to remove sucrose. The pellet is then resuspended in the Hepes-buffered saline and a colorimetric protein assay is performed on the bulk material. The material is diluted to 2 mg/ml in buffer or as requested and bottled in 1 ml aliquots for standard inventoried antigen. Inventoried product is tested for hemmagglutination, an EID50 titer (embryo infectious dosage @ 50%), and protein concentration.



| HUMAN INFLUENZA VIRUS               |                                       |                                                     |                                    |
|-------------------------------------|---------------------------------------|-----------------------------------------------------|------------------------------------|
|                                     | Purified<br>(2 mg/ml)<br>Material No. | Purified &<br>Inactivated (2 mg/ml)<br>Material No. | Allantoic<br>Fluid<br>Material No. |
| Influenza A/PR/8/34 (H1N1)          | 10100374                              | 10100782                                            | 10100781                           |
| Influenza A X-31, A/Aichi/68 (H3N2) | 10100375                              | 10100784                                            | 10100783                           |
| Influenza A/Victoria/3/75 (H3N2)    | 10100376                              | N/A                                                 | 10100785                           |
| Influenza A/Hong Kong/8/68 (H3N2)   | 10100378                              | N/A                                                 | 10100787                           |
| Influenza B/Lee/40                  | 10100379                              | N/A                                                 | 10100788                           |

| HUMAN INFLUENZA AVIAN ANTISERA |          |          |          |          |          |
|--------------------------------|----------|----------|----------|----------|----------|
|                                | 1 ml     | 5 ml     | 10 ml    | 50 ml    | 100 ml   |
| Influenza A/PR/8/34            |          |          |          |          |          |
| Liquid Material No.            | 10100663 | 10100664 | 10100665 | 10100666 | 10100667 |
| Lyophilized Material No.       | 10100502 | 10100503 | 10100504 | 10100505 | N/A      |