



Product Sheet

# Influenza A virus (H1N1) (ATCC® VR-1682™)

Please read this **FIRST**

Storage Temp.  
**-70°C or colder**

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Biosafety Level  
**2**

## Intended Use

This product is intended for research use only. It is not intended for any animal or human therapeutic or diagnostic use.

## Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: Influenza A virus (H1N1) (ATCC® VR-1682™)

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
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Or contact your local distributor

## Description

**Strain:** A/Swine/1976/31 (TC-adapted)  
**Classification:** *Orthomyxoviridae*, *Influenzavirus A*  
**Original Source:**  
Hog in Iowa, 1931.  
**Depositor:** M.T. Coleman and ATCC

## Batch-Specific Information

Refer to the Certificate of Analysis for batch-specific test results.

## Propagation

**Propagation Host:**  
**Production Host:** MDCK (ATCC CCL-34)  
**Alternate Hosts:** Chicken embryo; MDCK and monkey kidney cells (MkK)  
**Recommended Host:** MDCK (ATCC® CCL-34)  
**Effect on Host:**  
CPE (cell rounding, degeneration, sloughing)  
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## Medium:

Virus growth medium: EMEM (ATCC® 30-2003) + BSA (Invitrogen 15260-037) + HEPES (Gibco 15630-106) + Trypsin [TPCK Treated] (USB 22725)

## Growth Conditions

For best results, plate cells 24-48 hours in advance. Infect at 80%-90% confluent (not 100% confluent) using a multiplicity of infection (MOI) of 0.01 to 1.0. Incubate at 35.0°C in a humidified, 5% CO<sub>2</sub> atmosphere for 2-4 days, until CPE are well advanced in 100% of the culture. In TC, ATCC VR-1682 should be grown in serum free media that contains 1 ug/ml TPCK-treated trypsin, 0.125% BSA and 1% HEPES (1 molar stock).

## Comments

Derived by adaptation of egg-passage A/Swine/1976/31 (ATCC® VR-99) to MDCK (ATCC® CCL-34) cells. (Note: ATCC® VR-99 and ATCC® VR-1682 have not been compared with respect to sequence or infectivity in chick embryo and tissue culture).

## References

References and other information relating to this product are available online at [www.atcc.org](http://www.atcc.org).

## Key Abbreviations

BSA, bovine serum albumin  
CE, chicken embryo  
CO<sub>2</sub> (CO2), carbon dioxide  
CPE, cytopathic effect  
EMEM, Eagles minimum essential medium  
HEPES, N-2-Hydroxyethylpiperazine-N-2-Ethane Sulfonic acid  
MDCK, Madin-Darby canine kidney cells  
mg (ug), microgram  
mg, milligram  
MkK, monkey kidney cells  
mL, milliliter  
RBC, red blood cells  
TC, tissue culture  
TPCK, 1(Tosylamide-2 phenyl) ethyl chloromethyl ketone  
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## Biosafety Level: 2



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Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

**ATCC Warranty**

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this strain. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

**Disclaimers**

This product is intended for laboratory research purposes only. It is not intended for use in humans. While ATCC uses reasonable efforts to include accurate and up-to-date information on this product sheet, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, and use. ATCC is not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to insure authenticity and reliability of strains on deposit, ATCC is not liable for damages arising from the misidentification or misrepresentation of cultures.

Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at [www.atcc.org](http://www.atcc.org)

Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).  
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