



DATA SHEET

For research use only. Not for use in humans.

Reagent:	ACH-2 Cells
Catalog Number:	ARP-349
Lot Number:	170010
Release Category:	C
Provided:	Each vial of ARP-349 contains approximately 3.5×10^6 cells in 1 mL of RPMI 1640 medium containing 40% heat-inactivated fetal bovine serum (FBS) and 7.5% dimethyl sulfoxide (DMSO). Post-thaw viability was 76%.
Cell Type:	Subclone A3.01, which is derived from CEM, a human T-cell line originally isolated from a four-year-old Caucasian female with acute lymphoblastic leukemia.
Propagation Medium:	The recommended propagation medium is RPMI 1640 supplemented with 10 mM HEPES, 2 mM L-glutamine and non-essential amino acids, 90%; heat-inactivated FBS, 10%.
Freeze Medium:	The recommended freeze medium is RPMI 1640 medium supplemented with 40% heat-inactivated FBS and 7.5% DMSO.
Growth Characteristics:	ACH-2 cells grow in single cell suspension with some visible clumping. Passage the cells every three days to give a concentration of 1×10^6 cells per mL. Doubling time is 24 hours. Cells require RPMI 1640 with supplements for regular growth, but they can also be grown in OPTI-MEM containing 2.5% fetal bovine serum, 2.0 mM L-glutamine, 100 U per mL penicillin, 100 μ g per mL streptomycin and 0.5 μ M β -mercaptoethanol.
Sterility:	Tests for bacteria, fungi and mycoplasma were negative.
Description:	ARP-349 is a T-cell clone of A3.01 cells that are CD4-, CD5+, transferrin receptor+ and Leu-1+, with one integrated proviral copy of latent human immunodeficiency virus type 1 (HIV-1) LAV.
Special Characteristics:	Parent A3.01 cells were infected with HIV-1 LAV and cloned by limiting dilution. ACH-2 is a clone that survived infection and constantly produces and secretes low levels of reverse transcriptase and p24 into cell culture supernatant. The cells can be induced with phorbol myristate or TNF- α to secrete high levels of infectious HIV-1.
Recommended Storage:	Keep at -100°C or colder, preferably in the vapor phase of a liquid nitrogen freezer.
Contributor:	Dr. Thomas Folks
References:	<p>Clouse, K. A., et al. "Monokine Regulation of Human Immunodeficiency Virus-1 Expression in a Chronically Infected Human T Cell Clone." <i>J. Immunol.</i> 142 (1989): 431-438. PubMed: 2463307.</p> <p>Folks, T. M., et al. "Tumor Necrosis Factor Alpha Induces Expression of Human Immunodeficiency Virus in a Chronically Infected T-Cell Clone." <i>Proc. Natl. Acad. Sci. USA</i> 86 (1989): 2365-2368. PubMed: 2784570.</p>
Citation:	Acknowledgment for publications should read "The following reagent was obtained through the NIH HIV Reagent Program, Division of AIDS, NIAID, NIH: ACH-2 Cells, ARP-349, contributed by Dr. Thomas Folks."

**Biosafety Level: 2**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories, 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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