DATA SHEET

For research use only. Not for use in humans.

Reagent: A3.01 cells

Catalog Number: ARP-166

Lot Number: 190169

Release Category: C

Provided: Each vial of ARP-166 contains approximately 3.52 × 10^6 cells in 0.8 mL of freeze medium. Post-thaw viability was 52%.

Cell Type: ARP-166 is a hypoxanthine-aminopterin-thymidine (HAT)-sensitive derivative of CEM, a human T-cell line derived from the peripheral blood buffy coat of a four-year-old Caucasian female with acute lymphoblastic leukemia.

Propagation Medium: The recommended propagation medium is 90% RPMI 1640, 10% heat-inactivated fetal bovine serum and 2.0 mM L-glutamine.

Freeze Medium: The recommended freeze medium is Gibco Recovery Cell Culture Freezing Medium.

Growth Characteristics: When thawing ARP-166, DMSO should be gently washed out with 37°C medium and the initial culture should be seeded at 1 x 10^6 cells/mL. Cells quickly recover viability over 3 days. Cells should be passaged every three days to give a concentration of 1 x 10^6 cells/mL. Cells grow in single-cell suspension with a mature lymphocyte morphology and have a doubling time of 24 hours. A3.01 has also been grown successfully in OPTI-MEM® Reduced Sera Medium containing 2.5% fetal bovine serum, 2.0 mM L-glutamine, 100 U/mL penicillin and 100 µg/mL streptomycin.

Sterility: Tests for bacteria, fungi and mycoplasma were negative.

Description: ARP-166 cells are HAT-sensitive derivatives of CEM cells that support human immunodeficiency virus 1 (HIV-1) replication.

Special Characteristics: ARP-166 was selected by growth in hypoxanthine and aminopterin-containing medium. It is suitable for human T-lymphocyte fusions. These cells are Leu-3^+, Leu-8^+, Leu-1^+, *tac*$^-$, transferrin receptor$^+$, sensitive to infection with lymphadenopathy-associated virus (LAV), and susceptible to cytopathic effects when infected.

Recommended Storage: Keep at -100°C or colder, preferably in the vapor phase of a liquid nitrogen freezer.

Contributor: Dr. Thomas Folks

References:

Buttke, T. M. and T. M. Folks. “Complete Replacement of Membrane Cholesterol with 4,4', 14-Trimethyl Sterols in a Human T Cell Line Defective in Lanosterol Demethylation.” J. Biol. Chem. 265 (1992): 8819-8826. PubMed: 1577721.

Folks, T., et al. “Characterization of a Continuous T-Cell Line Susceptible to the Cytopathic Effects of the Acquired Immunodeficiency Syndrome (AIDS)-Associated Retrovirus.” Proc. Natl. Acad. Sci. USA 82 (1985): 4539-4543. PubMed: 2989831.

Citation: Acknowledgment for publications should read “The following reagent was obtained through the NIH HIV Reagent Program, Division of AIDS, NIAID, NIH: A3.01Cells, ARP-166, contributed by Dr. Thomas Folks.” Also include the references cited in any publication.

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Biosafety Level: 1

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 (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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