DATA SHEET

For research use only. Not for use in humans.

Reagent: HLM1 cells

Catalog Number: ARP-2090

Lot Number: 200513

Release Category: C

Provided: Each vial of ARP-2090 contains approximately 4.4 × 10^6 cells in 0.6 mL of freeze medium. Post-thaw viability was 94%.

Cell Type: ARP-2090 was generated by transducing HeLa CD4+ cells (ARP-154, contributed by Dr. Richard Axel) with the *tat*-defective mutant pMtat- (ARP-2085), which contains a termination codon (TGA) in place of the methionine initiator codon (ATG) in the *tat* gene. The human immunodeficiency virus (HIV) proviral DNA was derived from pHXB2gpt, an infectious molecular clone of HIV-1 IIIB (ARP-398, contributed by Dr. R. Gallo).

Propagation Medium: The recommended propagation medium is DMEM supplemented with 5% fetal bovine serum and 10µg/mL Geneticin.

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

Growth Characteristics: ARP-2090 cells can be maintained in culture by adding fresh medium to the adherent cells every 3-4 days. Trypsinization is necessary only once every month or so unless the cells become over-confluent or need to be transferred to an additional flask.

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

Description: ARP-2090 is a culture of HLM1 cells that are $CD4^+$ and negative for virus particle production, but can be stimulated to produce non-infectious virions.

Special Characteristics: ARP-2090 cells are negative for virus particle production, but can be induced to express high levels of non-infectious HIV-1 and syncytial cells after transfection or cocultivation with *tat*-expressing clones, or after stimulation with TNF-α, PMA, or sodium butyrate. A combination of UV light treatment and cocultivation with *tat*-expressing cells results in the production of infectious virus.

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

Contributor: Dr. Reza Sadaie

References:

Sadaie, M. R., et al. "Activation of *tat*-Defective Human Immunodeficiency Virus by Ultraviolet Light." New Biol. 2 (1990): 479-486. PubMed: 1981148.

Sadaie, M. R., and G. L. Hager. "Induction of Developmentally Programmed Cell Death and Activation of HIV by Sodium Butyrate." Virology 202 (1994): 513-518. PubMed: 8009866.

Citation: Acknowledgment for publications should read "The following reagent was obtained through the NIH HIV Reagent Program, Division of AIDS, NIAID, NIH: HLM1 Cells, ARP-2090, contributed by Dr. Reza Sadaie." Also include the references cited in any publication.

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

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