



NIH AIDS Reagent Program

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DATA SHEET

Reagent:	☒ HIV-1 LAV infected 8E5 Cells
Catalog Number:	95
Lot Number:	100217
Release Category:	C
Provided:	3 x 10 ⁶ cells/ml. Viability is 95%.
Cell Type:	Subclone of LAV-infected A3.01, a CD4 ⁺ CEM-derived human T-cell line.
Propagation Medium:	RPMI 1640, 90%; fetal bovine serum, 10%.
Freeze Medium:	RPMI 1640, 82.5%; fetal bovine serum, 10%; and DMSO, 7.5%.
Growth Characteristics:	When thawing, slowly dilute the cells with 37°C medium dropwise. Begin the culture at 2 x 10 ⁶ cells/ml, splitting the cells 24 hours later 1 x 10 ⁶ cells/ml. Passage the cells every three days thereafter to give a concentration of 1 x 10 ⁶ cells/ml. Cells grow in single cell suspension with some clumping. 8E5/LAV has also been successfully grown in OPTI-MEM containing 2.5% fetal bovine serum, 2.0 mM L-glutamine, 100 U/ml penicillin, 100 µg/ml streptomycin, and 0.5 µM β-mercaptoethanol.
Sterility:	Negative for bacteria, mycoplasma, and fungi.
Special Characteristics:	Similar in morphology to other T-cell lines. A3.01 parent cells were infected with LAV and selected by a series of 3 exposures to IUdR. Each 8E5/LAV subclone contains a single integrated copy of proviral DNA (no unintegrated DNA) directing synthesis of defective virus particles. Cells are CD4 ⁻ and secrete high levels of p24, but do not produce RT. Please note, publications have shown that multiple passages of this cell line, particularly at high split ratios, can result in a loss of proviral DNA. See the second and third articles in the reference section for more information.

ALL RECIPIENTS OF THIS MATERIAL MUST COMPLY WITH ALL APPLICABLE BIOLOGICAL, CHEMICAL, AND/OR RADIOCHEMICAL SAFETY STANDARDS INCLUDING SPECIAL PRACTICES, EQUIPMENT, FACILITIES, AND REGULATIONS. NOT FOR USE IN HUMANS.

Recommended Storage: Keep the reagent in liquid nitrogen.

Contributor: Dr. Thomas Folks.

References:

Folks, T. M., Powell, D., Lightfoote, M., Koenig, S., Fauci, A. S., Benn, S., . . . et al. (1986). Biological and biochemical characterization of a cloned Leu-3- cell surviving infection with the acquired immune deficiency syndrome retrovirus. *J Exp Med*, 164(1), 280-290. [PUBMED](#)

Busby, E., Whale, A. S., Ferns, R. B., Grant, P. R., Morley, G., Campbell, J., . . . Garson, J. A. (2017). Instability of 8E5 calibration standard revealed by digital PCR risks inaccurate quantification of HIV DNA in clinical samples by qPCR. *Sci Rep*, 7(1), 1209. doi:10.1038/s41598-017-01221-5 [PUBMED](#)

Wilburn, K. M., Mwandumba, H. C., Jambo, K. C., Boliar, S., Solouki, S., Russell, D. G., & Gludish, D. W. (2016). Heterogeneous loss of HIV transcription and proviral DNA from 8E5/LAV lymphoblastic leukemia cells revealed by RNA FISH:FLOW analyses. *Retrovirology*, 13(1), 55. doi:10.1186/s12977-016-0289-2 [PUBMED](#)

NOTE: Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: HIV-1 LAV infected 8E5 Cells from Dr. Thomas Folks." Also include the reference cited above in any publications.

Scientists at for-profit institutions or who intend commercial use of this reagent must contact the NIH Office of Technology Transfer, Email: NIAIDAIDSReagent@niaid.nih.gov, before the reagent can be released. Please specify the name and a description of the intended use of the reagent.

Last Updated May 31, 2017

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