



## NIH AIDS Reagent Program

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### DATA SHEET

|                                |   |
|--------------------------------|---|
| <b>Reagent:</b>                | ☒ HIV-1 infected U937 Cells (U1)  |
| <b>Catalog Number:</b>         | 165   |
| <b>Lot Number:</b>             | 160148  |
| <b>Release Category:</b>       | C   |
| <b>Provided:</b>               | 1 mL of cells<br>Post thaw cell count = $4.1 \times 10^6$ cells/mL<br>Post thaw cell viability = 51%<br>Cell viability increased to 93% after 4 days in culture.  |
| <b>Cell Type:</b>              | U937 is a pro-monocyte obtained from a pleural effusion of a two-year-old caucasian male with diffuse histiocytic lymphoma.   |
| <b>Propagation Medium:</b>     | RPMI 1640, 2.0 mM L-glutamine, NEAA, 90%; heat-inactivated fetal bovine serum, 10%  |
| <b>Freeze Medium:</b>          | Fetal bovine serum, 90%; DMSO, 10%  |
| <b>Growth Characteristics:</b> | When thawing, slowly dilute the cells with 37°C medium dropwise. Begin the culture at $2.0 \times 10^6$ cells/ml, splitting the cells 24 hours later to give a concentration of $1.0 \times 10^6$ cells/ml. Passage the cells every four days thereafter to a concentration of $1.0 \times 10^6$ cells/ml. Cells grow in single cell suspension. Doubling time is 36 hours. |
| <b>Morphology:</b>             | Large, semi-granular suspension cell line   |
| <b>Sterility:</b>              | Negative for bacteria, mold, yeast, and Mycoplasma  |
| <b>Description:</b>            | U1 is a subclone of U937 that has been chronically infected with HIV-1.   |

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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.

**Special  
Characteristics:**

These cells show minimal constitutive expression of virus. Certain cytokines in addition to phorbol myristate acetate can induce virus expression. The cells can take up and secrete virus into the medium. Surface expression of CD4 is low. Useful for latency induction experiments. Cells should remain in log phase expanded growth (>98% viability) immediately prior to stimulation. Supernatant reverse transcriptase activity and viral antigens can be detected approximately 24-48 hours after stimulation. Observe all BSL-3 practices when working with these cells.

Alternate names: U1, U1/HIV-1

**Recommended  
Storage:**

Keep the reagent in liquid nitrogen.

**Contributor:**

Dr. Thomas Folks

**References:**

Folks, T. M., Justement, J., Kinter, A., Dinarello, C. A., & Fauci, A. S. (1987). Cytokine-induced expression of HIV-1 in a chronically infected promonocyte cell line. *Science*, 238(4828), 800-802. [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 infected U937 Cells (U1) 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](mailto: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**

October 08, 2020

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