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DATA SHEET

Reagent:	HeLa CD4+ Cells (Clone 1022)
Catalog Number:	1109
Lot Number:	523470
Release Category:	C
Provided:	1.3 x 10^6cells/vial and cells are 92% viable.
Cell Type:	Human cervical epithelial carcinoma.
Propagation Medium:	RPMI 1640, 90%; fetal bovine serum, 10%; G418 (Geneticin, Gibco) 1.0 mg/mL.
Freeze Medium:	RPMI 1640, 50%; fetal bovine serum, 40%; DMSO, 10%.
Growth Characteristics:	Medium rapid growth (doubling time approximately 38 hours). Repassage by trypsinizing every 4 to 6 days and splitting 1:5 - 1:10. Use to seed for HIV focal infectivity when cell density is subconfluent (< 3 x 10^6 cells in a 25 cm^2 flask). For long-term passage, maintain cells in 1.0 mg/mL G418. During the rapid expansion of cells to attain the numbers necessary for assays, G418 may be omitted.
Sterility:	Negative for bacteria, fungi, and mycoplasma.
Description:	HeLa cells that express CD4.
Special Characteristics:	Clone 1022 cells express human CD4 protein on the cell surface and can be infected by most isolates of human immunodeficiency virus. Foci of HIV-1 infected cells can be detected by indirect immunoperoxidase or immunofluorescence using anti-HIV-1 serum or monoclonal antibodies, or at a lower efficiency by syncytia formation. These cells are more sensitive than HT4-6C cells for titration of isolates from AIDS patients, giving endpoint titration values similar to PBLs. However, enhanced sensitivity in titration of laboratory-adapted HIV strains is not seen. Cells can be grown in the presence of G418. Clone 1022 cells contain no ecotropic or amphotropic murine retrovirus env genes.

HeLa cells were infected with a retroviral vector expressing CD4 and Neo^r. Clones were selected for neomycin resistance and screened for the presence of surface CD4 via indirect immunofluorescence. Morphology is variable epithelial.

Protocol:Focal Immunoassay (FIA) to Detect HIV

Recommended Storage: Liquid nitrogen.

Contributor: Dr. Bruce Chesebro.

References:

Chesebro B Wehrly K. Development of a sensitive quantitative focal assay for human immunodeficiency virus infectivity. *J Virol* **62**:3779-3788, 1988.

Chesebro B, Buller R, Portis J, Wehrly K. Failure of human immunodeficiency virus entry and infection in CD4-positive human brain and skin cells. *J Virol* **64**:215-221, 1990.

Chesebro B, Wehrly K, Metcalf J, Griffin DE. Use of a new CD4-positive HeLa cell clone for direct quantitation of infectious human immunodeficiency virus from blood cells. *J Infect Dis* **163**:64-70, 1991.

NOTE:

Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: HeLa CD4+ Cells (Clone 1022) from Dr. Bruce Chesebro." Also include the references cited above in any publications.

The US Government has submitted a patent application on this reagent.

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.

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