



NIH AIDS Reagent Program

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DATA SHEET

Reagent: GHOST (3) CXCR4+CCR5+ Cells

Catalog Number: 3942

Lot Number: 190505

Release Category: C

Provided: 600 uL of cells
Post thaw cell count = 5.8×10^6 cells/Vial
Post thaw cell viability = 94 %

Cell Type: HOS (human osteosarcoma) cells

Propagation Medium: DMEM, 90%; fetal bovine serum, 10%; 500 µg/mL. G418; 100 µg/mL. hygromycin; 1 µg/mL. puromycin

Freeze Medium: Donor Provided Freeze Media: Fetal bovine serum, 90 %; DMSO, 10%
Current Freeze Media: Gibco Recovery Cell Culture Freezing Medium

Growth Characteristics: Reduce hygromycin concentration in the propagation medium to 50 µg/mL if cells appear too sensitive.

Morphology: Adherent, Epithelial-like Cell Line

Sterility: Negative for mycoplasma, bacteria, and fungi

Description: Human osteosarcoma cells expressing CD4, CXCR4 and CCR5. This cell line has a tat-dependent HIV-2 LTR-GFP construct producing GFP in response to HIV infection.

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:

GHOST (3) parental cells are derived from HOS (human osteosarcoma) cells that were stably transduced with a MV7neo-T4 retroviral vector as well as stably cotransfected with a HIV-2 LTR-GFP construct and the CMV IE driving hygromycin-resistance construct.

GHOST (3) CCR5+ Cells (Hi-5) were generated by transduction of the parental cells GHOST (3) (Cat# 3679) with the retroviral MLV BABE-puro vector containing the human CCR5 gene, then additionally transduced with the non-selectable MX-CCR5 retroviral vector and sorted for high CCR5 expression.

GHOST (3) CXCR4+ CCR5+ Cells were generated by transduction of the GHOST (3) CCR5+ Cells (Hi-5) (Cat# 3944) with the non-selectable MX-CCR4 retroviral vector and sorted for high CXCR4 expression. These cells are HIV indicator cells, they can be used to titer virus, determine the phenotypic properties and in drug/neutralization studies. For a full listing of the available GHOST (3) HIV indicator cells, please see Table 1 below.

GHOST (3) Parent Cell Line: Progenitor cell line used to develop GHOST (3) indicator panel.

GHOST Cell Transformants: Indicator cells for HIV-1, HIV-2, or SIV infection with uncloned, primary isolates, molecular clones, or pseudotyped virus. The puromycin-resistant cells are pools rather than clones for human coreceptor expression.

This cell line was cultured in vitro and the expression of the receptor(s) of interest was confirmed by flow cytometry. Single cells were then individually sorted and propagated, with continued monitoring of expression of key receptors. Expanded single-cell clones with confirmed receptor expression were then cryopreserved.

Table 1: GHOST (3) HIV Indicator Cells

Protocol: Care and use of GHOST (3) HIV indicator cells

Alternate names: GHOST (3) X4/R5

Recommended Storage:

Keep the reagent in liquid nitrogen.

Contributor:

Dr. Vineet N. KewalRamani and Dr. Dan R. Littman.

References:

A. Morner, A. Bjorndal, J. Albert, V. N. Kewalramani, D. R. Littman, R. Inoue, R. Thorstensson, E. M. Fenyo and E. Bjorling. (1999). Primary human immunodeficiency virus type 2 (HIV-2) isolates, like HIV-1 isolates, frequently use CCR5 but show promiscuity in coreceptor usage. J Virol, 73(3), 2343-9. [PUBMED](#)

NOTE:

Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: GHOST (3) CXCR4+CCR5+ Cells from Dr. Vineet N. KewalRamani and Dr. Dan R. Littman (cat# 3942)." 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 New York University Office of Industrial Liaison at the following email address: abram.goldfinger@nyumc.org, before the reagent can be released.

Last Updated

July 07, 2020

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