



NIH AIDS Reagent Program

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DATA SHEET

Reagent: HIV-1 NL4-3 Gag-iGFP ΔEnv Non-Infectious Molecular Clone

Catalog Number: 12455

Lot Number: 160161

Release Category: B

Provided: 5 µg of dried purified DNA stabilized in DNastable *PLUS*

Cloning Vector: pUC18
Ampicillin resistant

Host Strain: Plasmids can be propagated in STBL2 cells and grown at 37°C. Larger molecular clones may benefit from growth at 30°C. This construct may also be grown in other competent cells.

Description: A full length non-infectious HIV-1 NL4-3 Gag-iGFP Env-deficient molecular clone

Special Characteristics: This construct is 15588 bp including the insert.

The source of this molecular clone is HIV-1 NL4-3 Infectious Molecular Clone (pNL4-3) (cat# 114). This plasmid carries green fluorescent protein (GFP) inserted into the Gag protein between the MA and CA domains of Gag, with HIV-1 protease cleavage sites created to flank the GFP insertion. A frame shift mutation (restriction site NdeI) was also introduced to disrupt the *env* open reading frame making this clone effectively *env* null. This plasmid may be used to generate fluorescently labeled HIV-1 particles and may be pseudotyped by co-transfection with Env expression plasmids or used as a negative control for HIV-1 Gag-iGFP.

Applications: flow cytometry, fluorescence microscopy, monitoring cell-to-cell transmission of HIV, single particle imaging, single particle fusion assays

[Contributor provided plasmid map and sequence information](#)

[Plasmid map and sequence file lot 160161](#)

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.

This reagent is currently being provided as dried purified DNA stabilized in DNASTable *PLUS*. Please see the notice for additional information and the protocol for reconstitution of dried DNA reagents. [Dried DNA Notice](#)

Alternative names: HIV Gag-iGFP ΔEnv

Recommended Storage:

Keep the reagent at room temperature in a dry storage cabinet or in a moisture barrier bag.

Contributor:

Dr. Benjamin Chen

References:

Chen, P., Hubner, W., Spinelli, M. A., & Chen, B. K. (2007). Predominant mode of human immunodeficiency virus transfer between T cells is mediated by sustained Env-dependent neutralization-resistant virological synapses. *J Virol*, 81(22), 12582-12595. doi:10.1128/JVI.00381-07 [PUBMED](#)

Hubner, W., Chen, P., Del Portillo, A., Liu, Y., Gordon, R. E., & Chen, B. K. (2007). Sequence of human immunodeficiency virus type 1 (HIV-1) Gag localization and oligomerization monitored with live confocal imaging of a replication-competent, fluorescently tagged HIV-1. *J Virol*, 81(22), 12596-12607. doi:10.1128/JVI.01088-07 [PUBMED](#)

Hubner, W., McNerney, G. P., Chen, P., Dale, B. M., Gordon, R. E., Chuang, F. Y., . . . Chen, B. K. (2009). Quantitative 3D video microscopy of HIV transfer across T cell virological synapses. *Science*, 323(5922), 1743-1747. doi:10.1126/science.1167525 [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 NL4-3 Gag-iGFP ΔEnv Non-infectious Molecular Clone from Dr. Benjamin Chen." Also include the reference cited above in any publication.

Last Updated:

June 05, 2020

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