



NIH AIDS Reagent Program
20301 Century Boulevard
Building 6, Suite 200
Germantown, MD 20874
USA

Phone: 240 686 4740
Fax: 301 515 4015
aidsreagent.org

DATA SHEET

Reagent: HIV-1 LAI Env Codon Mutant Proviral Library

Catalog Number: 13344

Lot Number: 170391

Release Category: C

Provided: 1 vial of WT plasmid and 3 vials of independently generated Env codon mutant libraries, each containing 0.1 µg of purified DNA at 0.01 µg/µL in 10 mM Tris-Cl, pH 8.5 (4 vials total)

Cloning Vector: pLAI- δ *env*-BsmBI
Ampicillin resistant

Cloning Site: BsmBI cloning site

Description: A complete library of HIV-1 subtype B LAI Env clones developed to contain every Env codon mutation from aa 31-702, relative to the HXB2 numbering scheme.

Special Characteristics: This library set contains the HIV-1 LAI wildtype plasmid control (contains an unmutated Env) and three independently generated mutant plasmid libraries.

This reagent can be used to generate libraries of replication-competent HIV-1 virions that contain all Env amino acid mutations from aa 31-702 (relative to the HXB2 numbering scheme). These libraries can then be subjected to relevant selection pressures, such as viral replication or HIV immune escape to determine the role of individual mutations.

The cloning vector, pLAI- δ *env*-BsmBI, is a modified version of the proviral genomic plasmid pLAI (ARP Cat# 2532) that had *env* replaced by GFP flanked by restriction sites for BsmBI.

The amount of plasmid included in this library will not be enough for most experiments. To expand this library, see the attached document for specific details regarding library amplification and QC. [Click here for additional library amplification details](#)

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 at -20°C or lower. Avoid freeze-thaw cycles as reagent degradation may result.

Contributor: Dr. Jesse Bloom

References: J. D. Bloom. (2015). Software for the analysis and visualization of deep mutational scanning data. BMC Bioinformatics, 16, 168. doi:10.1186/s12859-015-0590-4 [PUBMED](#)

H. K. Haddox, A. S. Diggins and J. D. Bloom. (2016). Experimental Estimation of the Effects of All Amino-Acid Mutations to HIV's Envelope Protein on Viral Replication in Cell Culture. PLoS Pathog, 12(12), e1006114. doi:10.1371/journal.ppat.1006114 [PUBMED](#)

NOTE: Acknowledgement for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: HIV-1 LAI Env Codon Mutant Proviral Library from Dr. Jesse Bloom." Also include the references cited above in any publications.

Scientists at for-profit institutions or who intend commercial use of this reagent must contact the Tech Transfer office, Email: MTA@fredhutch.org, before the reagent can be released. Please specify the name and a description of the intended use of the reagent.

Last Updated: February 05, 2018

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.