



## NIH AIDS Reagent Program

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### DATA SHEET

**Reagent:** HIV-1 gp160 Optimized Expression Vector (VC20013\_030305\_c5)

**Catalog Number:** 13319

**Lot Number:** 170331

**Release Category:** E

**Provided:** 5 µg of dried purified DNA stabilized in DNASTable *Plus*

**Cloning Site:** MluI/NheI cloning site  
The size of the insert is 2451 bp.

**Cloning Vector:** pEMC\*  
Ampicillin resistant

**Description:** An expression vector which produces HIV-1 VC20013 subtype B gp160 protein

**Special Characteristics:** This construct is 6427 bp including the insert.  
This plasmid expresses gp160 that was cloned from the quasispecies of an ART-naïve HIV-1 infected individual from the Vanderbilt/CFAR cohort (VC20013). This individual developed moderate neutralization breadth within 3 years of infection. The *env* gene was optimized for motifs that are associated with neutralization and breadth by using the Robins-Krasnitz algorithm.  
The portion of the reagent name in parentheses represents the subject identifier, the date of the plasma sample from which Env was cloned, and a unique identifier of the plasmid.  
Genbank Accession Number: [KJ698315.1](#)  
Plasmids can be propagated in STBL2 cells and grown at 37°C. Larger plasmids may benefit from growth at 30°C.  
As identified in the 2014 Malherbe reference paper below, quasispecies variants (including this clone) that emerged over time with accumulated mutations in env were

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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.

(including this clone) that emerged over time with accumulated mutations in *env* were involved in the development of broadly neutralizing antibodies. Additional information about this expression vector and related expression vectors from the reference paper listed below can be found here: [Additional information regarding Haigwood expression vectors](#)

[Sequence file lot 170331](#)

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](#)

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

**Contributor:** Dr. Nancy L. Haigwood

**References:**

D. C. Malherbe, F. Pissani, D. N. Sather, B. Guo, S. Pandey, W. F. Sutton, A. B. Stuart, H. Robins, B. Park, S. J. Krebs, J. T. Schuman, S. Kalams, A. J. Hessel and N. L. Haigwood. (2014). Envelope variants circulating as initial neutralization breadth developed in two HIV-infected subjects stimulate multiclade neutralizing antibodies in rabbits. *J Virol*, 88(22), 12949-67. doi:10.1128/JVI.01812-14 [PUBMED](#)

D. N. Sather, S. Carbonetti, D. C. Malherbe, F. Pissani, A. B. Stuart, A. J. Hessel, M. D. Gray, I. Mikell, S. A. Kalams, N. L. Haigwood and L. Stamatatos. (2014). Emergence of broadly neutralizing antibodies and viral coevolution in two subjects during the early stages of infection with human immunodeficiency virus type 1. *J Virol*, 88(22), 12968-81. doi:10.1128/JVI.01816-14 [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 gp160 Optimized Expression Vector (VC20013\_030305\_c5) from Dr. Nancy L. Haigwood." Also include the references cited above in any publications.

**Recipient must not use or incorporate the reagent for commercial purposes.**

**Last Updated:** February 14, 2019

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