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DATA SHEET

Reagent:	Panel of full-length transmitted/founder (T/F) HIV-1 Infectious Molecular Clones
Catalog Number:	11919
Lot Number:	160307
Release Category:	C
Provided:	5 µg of each plasmid. Refer to the table below for a list of clones included in this set. Clones can also be ordered individually by catalog number.
Cloning Vector:	pBR322 or pCR-XL-TOPO (see table)
Host Strain:	STBL-3
Description:	Full-length transmitted/founder (T/F) HIV-1 infectious molecular clones (IMC). Using a mathematical model of HIV-1 sequence evolution in acute clinical infection and an experimental strategy based on single genome amplification (SGA) of plasma vRNA/cDNA, followed by direct sequencing of uncloned SGAs, the nucleotide sequence of HIV-1 envelope (env) genes of transmitted/founder viruses have been deduced (1). Applying the same model and experimental strategy to full-length HIV-1 RNA, the complete nucleotide sequences of viruses responsible for establishing productive clinical infection have been deduced (2). The model and empirical findings indicate that a single virus (or infected cell) is responsible for clinical HIV-1 infection in ˜ 80% of all cases of sexual transmission (1-4). Therefore, analysis of viruses actually responsible for transmission and productive clinical infection may be uniquely informative for HIV-1 pathogenesis and vaccine research. For this purpose, T/F single genome amplicons generated from either genomic HIV-1 RNA or proviral DNA were used to construct ten clade B T/F IMCs. An initial biological description of these IMC has been reported (2).
Special Characteristics:	Clade B **See table for clone details and sequence files.** **Table. Panel of HIV-1 Infectious Molecular Clones (IMC).**

Recommended Storage:	Keep at -20°C or lower. Avoid freeze-thaw cycles as reagent degradation may result.
Contributor:	Dr. John Kappes
References:	1. Keele, B. F., Giorgi, E. E., Salazar-Gonzalez, J. F., Decker, J. M., Pham, K. T., Salazar, M. G., . . . Shaw, G. M. (2008). Identification and characterization of transmitted and early founder virus envelopes in primary HIV-1 infection. Proc Natl Acad Sci U S A, 105(21), 7552-7557. doi:10.1073/pnas.0802203105 PUBMED 2. Salazar-Gonzalez, J. F., Salazar, M. G., Keele, B. F., Learn, G. H., Giorgi, E. E., Li, H., . . . Shaw, G. M. (2009). Genetic identity, biological phenotype, and evolutionary pathways of transmitted/founder viruses in acute and early HIV-1 infection. J Exp Med, 206(6), 1273-1289. doi:10.1084/jem.20090378 PUBMED 3. Salazar-Gonzalez, J. F., Bailes, E., Pham, K. T., Salazar, M. G., Guffey, M. B., Keele, B. F., . . . Hahn, B. H. (2008). Deciphering human immunodeficiency virus type 1 transmission and early envelope diversification by single-genome amplification and sequencing. J Virol, 82(8), 3952-3970. doi:10.1128/JVI.02660-07 PUBMED 4. Lee, H. Y., Giorgi, E. E., Keele, B. F., Gaschen, B., Athreya, G. S., Salazar-Gonzalez, J. F., . . . Perelson, A. S. (2009). Modeling sequence evolution in acute HIV-1 infection. J Theor Biol, 261(2), 341-360. doi:10.1016/j.jtbi.2009.07.038 PUBMED
NOTE:	Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: Panel of full-length transmitted/founder (T/F) HIV-1 Infectious Molecular Clones (Cat #11919) from Dr. John Kappes." Also include the references cited above in any publications. **Scientists at for-profit institutions or who intend commercial use of this reagentmust contact Hayes A. Lowe, J.D., UAB Research Foundation, The Office of Intellectual Property Management, AB 1120G, 1530 3rd Ave. S, Birmingham AL 35294-0111, Tel: 205-975-0843 Fax: 205-934-5427, email: halowe@uab.edu, before the reagent can be released.**
Last Updated:	June 25, 2018